

# COMMUNICATIONS S.O.I.

(SIGNALS OPERATING INSTRUCTIONS)

**A reference for the AmRRON Communicator**



# V

**Disaster and Civil Defense Communications**

*The American Redoubt Radio Operators Network*

[www.AmRRON.com](http://www.AmRRON.com)

# AmCON

(AmRRON CONdition)

(Threat level relative to conventional communications disruptions and guidance for action)

| LEVEL                                | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b><br><b>ACTIVE INCIDENT</b>   | <b>Conduct AmRRON Nets according to the Emergency Net Schedule. Make adjustments based on the situation.</b> <ul style="list-style-type: none"><li>- Prepare a STATREP or SITREP for your area.</li><li>- Follow all instructions of Net Control</li><li>- Conduct local nets to account for others and assess your local/regional situation.</li></ul>                                                                            |
| <b>2</b><br><b>Incident IMMINENT</b> | <b>Disruption of communications expected or highly likely</b> <ul style="list-style-type: none"><li>- Conduct a 'test' net among group and regional or national network as situation requires</li><li>- Monitor all sources and stay informed.</li><li>- Prepare all equipment for operation or evacuation</li><li>- Review radio operations with family/group.</li><li>- Maintain regular contact with your local group</li></ul> |
| <b>3</b><br><b>Incident Probable</b> | <b>Increased probability of interruption of conventional communications. Not 'imminent'.</b> <ul style="list-style-type: none"><li>- Finalize plans with family/friends/Network for 'what-if'</li><li>- Review Comms Plan and monitor radio traffic and increase frequency of nets as necessary.</li><li>- Maint./Checks on fuel, back-up power, batteries, etc.</li></ul>                                                         |
| <b>4</b><br><b>Incident Possible</b> | <b>Possible near-future interruption of conventional comms</b> <ul style="list-style-type: none"><li>- Inventory, locate, and assemble all comm equipment.</li><li>- Increase monitoring of situational developments (News)</li><li>- Make phone &amp; email contacts to keep everyone in your network informed.</li><li>- Continue with regularly-scheduled nets</li></ul>                                                        |
| <b>5</b><br><b>No Incident</b>       | <b>No known or anticipated threat to communications</b> <ul style="list-style-type: none"><li>- Conduct Regularly-scheduled practice nets</li><li>- Monitor radio frequencies and maintain proficiency</li><li>- Check in to local/regional ham nets, or monitor if unlicensed</li><li>- Develop and expand current nets and training sessions</li></ul>                                                                           |

## By John Jacob Schmidt



*"It would have been wonderful if they had prepared with a radio network that was interstate rather than just within small, cloistered groups. Those of you with Ham equipment will be hailed as heroes should this situation come to a theater near you."*

- SurvivalBlog: SHTF Lessons From Venezuela, by CSR

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# AmRRON MISSION STATEMENT



***We are committed to maintaining a continental network of radio operators for disaster response and civil defense, always ready to serve our communities, our states, our nation, and our fellow countrymen with unconventional communications in times of need.***

## **AmRRON Guiding Principles (Mission Statement expounded)**

1. All patriot-minded radio operators are welcome and encouraged to train, participate, and contribute for the purposes of disaster response and civil defense. When it is within an AmRRON operator's ability, he/she should always selflessly contribute to the preservation and protection of life, liberty, and property.
2. Proficiency is encouraged with all forms of communications, including licensed Amateur Radio, license free radios, and any other type of communications method.
3. All citizens are sensors (eyes and ears) during a disaster. The network exists not only for you to stay informed, but for you to inform others as well, sharing important information about developments and aiding in everyone's overall situational awareness.
4. AmRRON operators are willing to render communications assistance where it is needed and wanted, and avoid interfering where it is not.
5. AmRRON operators should always be willing and capable of supporting leaders in their communities who may not have communications capabilities, and may include clergy, community leaders, elected officials, and other patriot-minded organizations and individuals.
6. AmRRON members should be self-reliant, ready and skilled to provide communications in most any environment, under austere conditions, with little or no outside support for indefinite periods of time, especially when there is no commercial power or communications infrastructure.
7. AmRRON operators are committed to supporting and advancing traditional American values, our heritage, liberty, Christian charity, lawfulness, and helping our fellow countrymen in times of crisis, and never supporting those whose objectives are in conflict with those values and ideals.

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*[Amateur Radio] "plays a vital public safety communications service...[with]...tremendous potential...when all other forms of radio communication fail, especially during emergencies."*

**The Hon. Greg Walden**  
Member, U.S. Congress



# INTRODUCTION

This SOI was produced to assist in the standardization of communications among the prepper, patriot, and Redoubt communities, to increase the probability of connecting with like-minded groups and individuals in a major regional or national catastrophic event.

More specifically, this guide was designed to assist AmRRON (American Redoubt Radio Operators Network) operators, and other communicators, with the task of conducting communications operations during training exercises, disasters, and for civil defense. This will aid in the response to an event and, especially, provide the communications infrastructure for the recovery and rebuilding efforts afterward.

The AmRRON communications plan is a standardized communications protocol. It is NOT intended to be the 'end all' communications plan for your family or group. Every group, whether family, retreat group, community organization, militia, churches, mutual aid group, etc. should have their own internal communications plan.

Every family or group should identify at least one individual to become the designated communications expert (Communicator/Operator) for your group. The group can collectively strive toward setting minimum communications capability goals and then grow from there. As a minimum, you should have the capability to A) communicate among your own group and B) be able to receive communications in every band and mode (Scanner, local Ham, Regional and national Ham, commercial broadcasting, and shortwave radio broadcasts from across the country and around the world).

Licensed Ham operators (formally, Amateur Radio operators) are inherently connected and informed during emergencies when conventional communications are disrupted. This usually leaves the non-ham operators disconnected and uninformed. There are comparatively very few licensed ham operators among the populace, but there are many citizens in every community who can act as eyes and ears. These citizens often have no way of receiving valuable, life-saving information, and even less capable of relaying important information to someone who could disseminate that information widely to others, such as Hams.

AmRRON is changing that. With the development of the CH3 Project, Ham operators are now linked with non-licensed communicators using FRS, MURS, and CB radios to pass information in both directions. What was originally envisioned as a regional (American Redoubt) communications network is now continental. Local Ham 2m/non-ham CH3 nets are forming across the country. AmRRON has activated during multiple real-world disasters and events across the United States. We've assessed and modified our communications plan multiple times as new technology emerges and experience highlights needed improvements.

This is a work in progress, so thank you for joining us in this rewarding endeavor.

# IN CASE of EMERGENCY

## WHAT DO I DO? WHAT TO EXPECT?

### In a major regional or national grid-down emergency:

- Secure your family and yourself first.
- Local AmRRON operators will be taking to the air on CH3 and VHF ham (2m). Hopefully you have joined or established a local AmRRON net in your area.
- Regionally and nationally, HF operators are **already** on the air now!

### LOCAL:

- **Listen for Emergency Disaster Services for news and Updates:**
- Local Commercial Radio and Television (many have backup power)
- NOAA Weather Alert Radio
- ARES/RACES and local ham club Amateur Radio nets in your area (see [www.radioreference.com](http://www.radioreference.com) for listings in your area – **before** a disaster strikes).
- Police/Fire/EMS Scanner

### How do I listen?

- AM/FM radio receiver
- CH3 radio (FRS, MURS, CB)
- Ham Radio (VHF/UHF)
- Scanner (police, fire, EMS, Amateur Radio, aircraft, government, etc.)
- SDR (Software Defined Radio receiver)

### If you have two-way radio communications capabilities:

- Prepare a STATREP (or abbreviated STATREP, at minimum)
- Attempt to make initial contact with others using the S.O.I. Frequencies. **If no initial contact, then:**
- Join/start a net following the Net Schedule SECTION 1.
- If there is not a local AmRRON net in your area, tune in to local ham club and/or ARES/RACES nets.
- Listen for information and instructions.
- Send your STATREP to your local NCS and check on others.

# IN CASE of EMERGENCY

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# IN CASE of EMERGENCY

## REGIONAL/NATIONAL (HF Communications):

### To Listen:

- Amateur Radio transceiver or receiver
- Shortwave Radio with SSB (Single Sideband), or;
- SDR (Software Defined Radio) Receiver dongle, or;

### Get on the air!

1. Fill out STATREP (and any other pertinent reports)
2. Identify next scheduled Operational Net (SECTION 1)
3. Persistent Presence Net (see SECTION 1.3). Operators are on the air!
4. Start a Net Communications Log (See SECTION 6.4.1 - Page 71)
5. Be prepared to send STATREP to NCS and others in the network
6. Beacons (if you use JS8Call and/or FSQCall).

Sending JS8Call 'Heartbeat' when you first get on the air, or at the onset of the event, lets others know who is on the air and begins building the 'network'.

**\*\*\*REMINDER\*\*\*** Turn beacons/sounders/heartbeats **OFF** approximately 10 minutes prior to scheduled nets. Do not manually send queries in JS8Call during scheduled nets or when distributed traffic is being passed. This includes SNR requests, queries for messages to the group (such as @amrron), or group queries of any kind.

If there is not a scheduled net taking place, or starting soon, submit your Status Report for others' situational awareness. This will help begin to paint a picture for everyone on the air as to the scope and effects of the event.

7. Send a Commstat STATREP to the group @amrron (if you have and run Commstat). Send your STATREP to QST AmRRON in all the modes on which you are operational. This includes an abbreviated STATREP on fldigi, JS8Call, and FSQ. Also,
8. Follow instructions of NCS. Assume '*Schedule Bravo*' Net schedule until modifications to the schedule is announced (SECTION 1.2)

# IN CASE of EMERGENCY

## SECTION 1 OPERATIONAL NET SCHEDULE

| <b>NATIONAL Nets in <u>Zulu time</u> (DAYTIME)</b> |        |     |            |
|----------------------------------------------------|--------|-----|------------|
| <b>National VOICE</b>                              | 19:00Z | 20m | 14.338 USB |
| <b>National DIGITAL</b>                            | 20:00Z | 20m | 14.110 USB |
| <b>My Local Time --&gt;</b>                        |        |     |            |

| <b>EVENING Rolling Regional Net (80m HF)</b>                                                                                           |                  |                       |             |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------|-------------|
| Operational Regional Rolling Net times listed in <b><u>ZULU TIME</u></b>                                                               |                  |                       |             |
| <b>Net Type</b>                                                                                                                        | <b>Time ZULU</b> | <b>Time (Local)</b>   | <b>Freq</b> |
| <b>EASTERN DIGITAL Net</b>                                                                                                             | 0100             | 2100 sum<br>2000 wint | 3.588 USB   |
| <b>EASTERN VOICE Net</b>                                                                                                               | 0200             | 2200 sum<br>2100 wint | 3.818 LSB   |
| <b>CENTRAL DIGITAL Net</b>                                                                                                             | 0200             | 2100 sum<br>2000 wint | 3.588 USB   |
| <b>CENTRAL VOICE Net</b>                                                                                                               | 0300             | 2200 sum<br>2100 wint | 3.818 LSB   |
| <b>MOUNTAIN DIGITAL Net</b>                                                                                                            | 0300             | 2100 sum<br>2000 wint | 3.588 USB   |
| <b>MOUNTAIN VOICE Net</b>                                                                                                              | 0400             | 2200 sum<br>2100 wint | 3.818 LSB   |
| <b>PACIFIC DIGITAL Net</b>                                                                                                             | 0400             | 2100 sum<br>2000 wint | 3.588 USB   |
| <b>PACIFIC VOICE Net</b>                                                                                                               | 0500             | 2200 sum<br>2100 wint | 3.818 LSB   |
| sum= Summer (Daylight Savings) wint= Winter (Standard Time)                                                                            |                  |                       |             |
| **HF Digital Nets begin on Contestia 4/250, and traffic is passed using MFSK-32 (or other most suitable mode for the band conditions). |                  |                       |             |

## MORNING Rolling Regional Net (80m HF)

Operational Regional Rolling Net times listed in **ZULU TIME**

| Net Type                    | Time ZULU | Time (Local)          | Freq      |
|-----------------------------|-----------|-----------------------|-----------|
| <b>EASTERN DIGITAL Net</b>  | 1100      | 0700 sum<br>0600 wint | 3.588 USB |
| <b>EASTERN VOICE Net</b>    | 1200      | 0800 sum<br>0700 wint | 3.818 LSB |
| <b>CENTRAL DIGITAL Net</b>  | 1200      | 0700 sum<br>0600 wint | 3.588 USB |
| <b>CENTRAL VOICE Net</b>    | 1300      | 0800 sum<br>0700 wint | 3.818 LSB |
| <b>MOUNTAIN DIGITAL Net</b> | 1300      | 0700 sum<br>0600 wint | 3.588 USB |
| <b>MOUNTAIN VOICE Net</b>   | 1400      | 0800 sum<br>0700 wint | 3.818 LSB |
| <b>PACIFIC DIGITAL Net</b>  | 1400      | 0700 sum<br>0600 wint | 3.588 USB |
| <b>PACIFIC VOICE Net</b>    | 1500      | 0800 sum<br>0700 wint | 3.818 LSB |

sum= Summer (Daylight Savings) wint= Winter (Standard Time)

\*\*HF Digital Nets begin on Contestia 4/250, and traffic is passed using MFSK-32 (or other most suitable mode for the band conditions).

## QSY GUIDANCE:

It may be necessary for a net to change frequencies due to interference on the primary frequency, degraded band conditions for that particular band at that particular time, or for other reasons. This is the NCS's prerogative.

**Moved, but in the same band:** If you do not hear any activity at the scheduled net time/frequency, go up 3kHz, and then again 3kHz. Then 3kHz below the scheduled frequency, and then down another 3kHz until you find the net taking place.

**Moved to a different band:** If you do not hear the net after doing a +/- 3kHz search, then switch to a different band -- If on 80m, switch to 40m, etc.

**See QSY Instructions in Section 7.7, on Page 88**

# LOCAL 2m NETS

| <b>Morning Regional Net</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------------------|
| Regional Rolling Net times listed in <b>local time EACH time zone</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |        |                     |
| <b>Net Type</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Time (Local)</b> |        | <b>Band / Freq</b>  |
| <b>*Local 2m Voice</b> (inquiry)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 06:00               | Voice  | <b>2m / 146.420</b> |
| <b>*Local 2m Digital</b> (inquiry)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 06:30               | MFSK32 | <b>2m / 144.500</b> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |        |                     |
| <b>Local 2m Voice</b> (NET)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 08:30               | Voice  | <b>2m / 146.420</b> |
| <b>CH3</b> (FRS/MURS/CB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 08:45               | Voice  | <b>Channel 3</b>    |
| <b>Local 2m Digital</b> (NET)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 09:00               | MFSK32 | <b>2m / 144.500</b> |
| <p><b>*Inquiry</b> - This is a designated optional time to call for any Priority or higher traffic to be passed to the upcoming HF net, prior to the start of HF regional nets. Local nets may need to be adjusted due to circumstances or conditions at the local level. Determined by local NCSs.</p> <p><b>Summer/Winter - 40m/80m:</b> NCS may choose to switch to the other band if conditions on the scheduled band are severely degraded. See Section XX on Page XX for QSY Guidance</p> <p><b>VHF Nets: MFSK32 @ 1500 on the waterfall</b></p> |                     |        |                     |

## 1.2 Variable Daily Net Schedule

The situation will determine the number of daily nets needed throughout an event. It may only be necessary to run one net per day for exchanging traffic and sending out reports or announcements. Running as few nets as possible will help save time and precious emergency power.

The Persistent Presence Nets are always active, whether or not AmRRON is running 'Operational' nets, for stations who have the power to keep their stations on the air.

*"Schedule Alpha"*

*"Schedule Bravo"*

*"Schedule Charlie"*

*"Schedule Delta"*

Determined by National or Regional Net Coordinator, or by SIGCEN director. Relaying of announced schedule should be made using all means available.

| VARIABLE NET SCHEDULE                                                                                  |                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Schedule A (ALPHA)</b><br>or 'Persistence Only'                                                     | Persistent Presence Net ONLY (See Section 1.3)                                                                                                                                             |
| <b>Schedule B (BRAVO)</b><br><b>DEFAULT SCHEDULE</b><br>In event of unexpected<br>Comms-down emergency | <ul style="list-style-type: none"><li>● National</li><li>● Evening Rolling Regional</li></ul>                                                                                              |
| <b>Schedule C (CHARLIE)</b>                                                                            | <ul style="list-style-type: none"><li>● Morning Rolling Regional</li><li>● National</li><li>● Evening Rolling Regional</li></ul>                                                           |
| <b>Schedule D (DELTA)</b><br>(Customized or Hybrid<br>Schedule)                                        | Modified or customized schedule to meet mission requirements, when deviation from S.O.I. Schedule is necessary.<br>Details of modified net schedules would then be disseminated as needed. |

## 1.3 Persistent Presence Net

AmRRON is always on the air on the AmRRON HF digital frequencies!

Training, practice, and Operational Persistent Presence Nets run virtually the same. This enables a seamless transition from non-activation to operational status in the event of a sudden grid-down emergency.

See the full description of Persistent Presence Net operations in **Section 4.2**

| PERSISTENT PRESENCE DIGITAL NET |               |                                                        |
|---------------------------------|---------------|--------------------------------------------------------|
| Band/Freq.                      | ZULU          | Local Time                                             |
| 40M 7.110                       |               | Approx. 1 hr after sunrise to 20:00Z                   |
| 20M 14.110                      | 20:00 - 22:00 |                                                        |
| 40M 7.110                       |               | 22:00Z to approx. 1 hour after sunset                  |
| 80M 3.588                       |               | Approx. 1hr after sunset to approx. 1hr after sunrise. |



## SECTION 2 PRACTICE and TRAINING NETS

For the most updated practice net information, go to:

<https://amrron.com/nets-regional-national/>

### 2.1 Schedule: National Net Weeks: National, Rolling Regional, and local Nets

**1<sup>st</sup> and 3<sup>rd</sup> weeks of the month**

(The **first Tuesday of the month** begins the cycle)

#### 2.1.1 TUESDAYS (NATIONAL AND REGIONAL DIGITAL)

| NATIONAL HF Nets in <u>Zulu time</u> (DAYTIME) |        |     |            |
|------------------------------------------------|--------|-----|------------|
| National VOICE                                 | 19:00Z | 20m | 14.338 USB |
| National DIGITAL                               | 20:00Z | 20m | 14.110 USB |
| My Local Time -->                              |        |     |            |

| Evening HF Rolling Regional Net                                       |              |        |             |           |
|-----------------------------------------------------------------------|--------------|--------|-------------|-----------|
| Regional Rolling Net times listed in <u>local time</u> EACH time zone |              |        |             |           |
| Net Type                                                              | Time (Local) |        | Band / Freq |           |
| Regional **DIGITAL Net                                                | 20:00        | Summer | 40m         | 7.110 USB |
|                                                                       | 20:00        | Winter | 80m         | 3.588 USB |

NCS may change to the alternate band if primary band is degraded. See Section 7.7, covering 'QSY' procedures (P. 88)

### ROLLING REGIONAL HF NETS

**TUESDAY IS DIGITAL**

**THURSDAY IS VOICE**

## 2.1.2 THURSDAYS (Rolling Regional Voice)

|                                                                                                                                        |       |        |              |           |
|----------------------------------------------------------------------------------------------------------------------------------------|-------|--------|--------------|-----------|
| Regional HF VOICE Net                                                                                                                  | 20:00 | Summer | 40m          | 7.238 LSB |
|                                                                                                                                        | 20:00 | Winter | 80m          | 3.818 LSB |
|                                                                                                                                        |       |        |              |           |
| Local 2m Voice (NET)                                                                                                                   | 19:00 | Voice  | 2m / 146.420 |           |
| CH3 (FRS/MURS/CB)                                                                                                                      | 19:15 | Voice  | Channel 3    |           |
| Local 2m Digital (NET)                                                                                                                 | 21:00 | MFSK32 | 2m / 144.500 |           |
| **HF Digital Nets begin on Contestia 4/250, and traffic is passed using MFSK-32 (or other most suitable mode for the band conditions). |       |        |              |           |

**Rolling Regional HF Nets begin on the East Coast, and roll westward to the next region every hour (8pm local time)**

**HF bands can be finicky. If the primary seasonal band is severely degraded, he may determine the other band is more favorable, and move the net to the better band.**

## 2.2 Persistent Presence Net (Practice)

See **Section 4.2** for more details about Persistent Presence Nets.

*Operational and Practice schedules are the same.*

| <b>PERSISTENT PRESENCE DIGITAL NET</b> |               |                                                        |
|----------------------------------------|---------------|--------------------------------------------------------|
| <b>Band/Freq.</b>                      | <b>ZULU</b>   | <b>Local Time</b>                                      |
| 40M 7.110                              |               | Approx. 1 hr after sunrise to 20:00Z                   |
| 20M 14.110                             | 20:00 - 22:00 |                                                        |
| 40M 7.110                              |               | 22:00Z to approx. 1 hour after sunset                  |
| 80M 3.588                              |               | Approx. 1hr after sunset to approx. 1hr after sunrise. |

## SECTION 3 CH3 Project (Channel '3' Project)

The CH3 Project refers to a standardized communications plan for the most commonly used non-Ham radio communications bands which do NOT require a license to operate. These are:

- CB (Citizens Band)
- FRS (Family Radio Service)
- MURS (Multi-Use Radio Service)

### The standard is simple - 3,2,1

**3** - Turn to Channel **3** on CB, FRS, or MURS

**2** - **Two** Minutes before and after the hour, attempt to make contact with others.

**1** - Every **one** hour (during activation)

To conserve battery power, turn the radio off and attempt in the next hour.

### Scheduled Nets:

At approximately fifteen minutes into the nets, during Regularly-scheduled 2m Amateur Radio (Ham) nets, Net Control (NCS) *should* direct everyone participating in the nets to break for five minutes. This time is used to attempt to make CH3 contacts, take check-ins, and relay any voice traffic for the net, or from the net to be relayed to NCS. At the time specified by NCS, all stations should return to the AmRRON Amateur Radio net and report check-ins and traffic.

### For CH3 Scheduled Net Times:

**Operational Nets:** See Regional Net Schedules on Pages 15

**Practice Nets:** See Practice Net Schedule on Page 19



### LEGAL NOTE:

Under FCC Rules, you must hold a General Class license, or higher, to transmit in the 20, 40, or 80 meter bands using Voice or Digital Modes.

## SECTION 4 AmRRON NETS - DEFINED AND EXPLAINED

(Operational, Training, & Practice)

**In this section, the following are covered:**

- **Nets Explained**
  - **Operational Nets**
  - **Persistent Presence Nets** (take place continuously, during activation and non-activation periods). They're on the air right now!
  - **Special Net**
  - **Training Nets**
- 
- **Practice Nets**
  - **Reporting/Checking in online**
  - **Activities During Practice Nets**

**The ARRL's NET CONTROL STATION Training Manual describes nets in the following way:**

The word "net" is short for "network". Networks can be defined as groups of equipment, individuals, and/or agencies acting together to increase efficiency and effectiveness through shared information and resources. The word "network" can be further broken down into its two components. "Net" implies a capture and holding effect. "Work" implies that something productive is to be accomplished. Ham radio operators and nets in emergency situations capture, record, hold, and distribute information so that others may work (produce results) more effectively.

The purpose of any net is to provide a means for orderly communication within a group of stations. In a directed net, a net control station (NCS) and Assistant NCS organizes and controls all activity, much like a traffic cop at a busy intersection. His job is to keep traffic running smoothly, ensuring emergency vehicles have priority, and getting traffic where it needs to go while minimizing collisions. He's there to keep traffic moving in an orderly manner.

Directed nets are the best format when there are a large number of member stations.

Nets are either directed (formal) or undirected (informal or open).

---

**AmRRON Nets** are very similar, but with subtle differences.

AmRRON conducts *Scheduled Nets* (directed) and *Persistent Presence Nets* (undirected, and continuously (persistently) ongoing).

While nets take place in both voice and digital modes, the persistent presence net is intended to be HF and digital only, unless the situation calls for continuous coverage on voice frequencies (for example, when supporting groups or agencies who do not have digital capabilities, or in local VHF/UHF and CH3 nets and in tactical environments).

AmRRON Scheduled Nets follow a predetermined schedule, whether developed before an incident (such as this S.O.I.), or developed in response to, or during, an incident, where special circumstances require developing a modified schedule that deviates from this S.O.I.

AmRRON conducts scheduled nets in both operational (real-world or training exercise) and practice situations.

## **NET TYPES:**

- **OPERATIONAL (Including Persistent Presence Nets)**
- **TRAINING & PRACTICE (Including Persistent Presence Nets)**

### **4.1 OPERATIONAL NETS (Real-world or simulated Real-world)**

Operational nets are conducted during activations under real-world emergency conditions, or during scenario-based training exercises simulating real-world emergency conditions. **See the Operational Net Schedule in Section 1**

**When does an Operational Net happen?** This is dependent on the situation. If an event is foreseen (such as a hurricane or developing wildfires, or a pre-planned exercise) we will monitor the situation and begin on a controlled, pre-planned basis. AmRRON will adjust to the needs of the situation. If an incident occurs instantaneously (cyber attack or major earthquake), the operators in the affected area, on their own initiative, refer to their S.O.I. and take to the airwaves, seeking nets. Others will be doing the same. Those of us outside the affected area will be coordinating with each other and will be on the air right away, starting nets and organizing the rest of the network.

## 4.2 AmRRON Persistent Presence Nets

At pretty much any time of day someone, some *where* is on the air, whether AmRRON is activated (Operational), or in training mode.

While the Scheduled S.O.I. Nets are considered 'controlled' nets (meaning they are run by Net Control Station operators), the Persistent Presence Net is not controlled. Operators may make contact and pass traffic as the situation requires.

The 'Persistent Presence' Digital Net was implemented for:

- Operators who have sufficient backup power and the time to continue monitoring between the Scheduled S.O.I. Net cycles.
- Maintaining a lifeline for those who need to pass priority or emergency traffic when there is not a scheduled net taking place.
- Allowing for stations to assess band conditions and determine propagation paths to other stations, through beaconing (or sounding/heartbeating) and signal reports.
- Creating an opportunity for stations to directly pass point to point traffic, relieving the scheduled S.O.I. nets of congestion.

The following schedule has been developed as guidance reflecting our experience of which bands perform best at various times of the day and night. Band conditions can and do deviate sharply from our general expectations. These are very general guidelines, so there is no adjustment for Daylight Savings Time.

The following Persistent Presence Net Schedule is also found in section 2.2

| PERSISTENT PRESENCE DIGITAL NET |               |                                                        |
|---------------------------------|---------------|--------------------------------------------------------|
| Band/Freq.                      | ZULU          | Local Time                                             |
| 40M 7.110                       |               | Approx. 1 hr after sunrise to 20:00Z                   |
| 20M 14.110                      | 20:00 - 22:00 |                                                        |
| 40M 7.110                       |               | 22:00Z to approx. 1 hour after sunset                  |
| 80M 3.588                       |               | Approx. 1hr after sunset to approx. 1hr after sunrise. |

### 4.3 SPECIAL NETS

At times there are such unique circumstances, that communications are necessary requiring heavy modification or deviation from the AmRRON S.O.I..

Special Nets are developed on an 'as needed' basis to meet requirements of the situation. For example:

- Emergency Shelter Coordination Nets, search and rescue, or community events (races, parades, fairs, etc.)
- Joint operations with multiple agencies/entities each with their own communications plans, requiring customized plans for interoperability.
- Circumstances which make the use of all or part of the AmRRON S.O.I. unusable or impractical.

### 4.4 TRAINING NETS

Training Nets are designed to focus on developing or maintaining proficiency in very specific individual tasks or a group of skills which would be used in a real-world emergency situation. This helps to focus on the intended task or skill, or a combination of related tasks or skills.

#### **Practice vs. Training Exercises.**

##### **What's the difference?**

**'Practice'** is simply a chance to regularly use our equipment, ensure everything is in working order, and get on the air, demonstrate proper radio procedures, and practice passing traffic.

**'Training Exercises'** are when we take what we've practiced, and apply it as we would in a real emergency, simulating a real-world activation.

### ***“EXERCISE EXERCISE EXERCISE”***

During many of our scenario-based training exercises, some of the traffic may be very plausible and realistic. This realism could cause alarm to others who may stumble upon our nets without realizing we are following a training scenario to enhance the realism of the experience.

Whether during voice or digital nets, any such traffic should always be preceded and followed with training announcements.

The following are some examples we recommend:

***“EXERCISE EXERCISE EXERCISE...”***

***“This is only a training exercise”***

***“... In support of (name of exercise) AmRRON training exercise...”***

## **4.5 PRACTICE NETS**

Practice nets are normally regularly-scheduled voice or digital nets, which provide opportunities for operators to ‘practice’ using their equipment, skills, software, etc. It is a regular systems check to ensure all is working properly and that deficiencies are identified so they can be remedied.

Practice nets normally include a check in at the very least. A Net Word of the Week (NWOTW) is also generated during the National Nets, and then passed down throughout the network to give stations something to pass along.

Especially during digital nets, we pass the weekly AmRRON Intelligence Brief (AIB). This provides the opportunity each week (every Tuesday) to receive and pass on (relay) a small abbreviated briefing containing real-world news, intelligence, or emergency communications related traffic, and a chance to practice with AmRRON custom forms using FLDIGI, FLMSG, and FLAMP.

Beginning January 2020, the ‘Vericode’ project was introduced, providing an interesting and fun ‘scavenger hunt’ component to the regularly-scheduled AmRRON Practice Nets, requiring the combining of information from the AIB Veri-code and a separate ‘Supplemental Vericode’ to create a password which opens a weekly encrypted message posted at AmRRON.com. Opening the message reveals small snippets from a fictional series called the Partisan Operator Journal, with a new ‘Journal Entry’ each week.

**See Section 2 - Regularly-scheduled practice nets**

**or,** refer to the AmRRON Net Schedule at [www.AmRRON.com](http://www.AmRRON.com)



## 4.6 National Net Activities

Besides normal net check ins, there are other activities that help operators practice receiving and sending information, but also which make the experience fun and interesting.

**4.6a NET WORD OF THE WEEK:** The “Net Word of the Week” (NWOTW), originates from the **20m National Voice Net**, then is passed along over the Regional Nets, and is finally shared during the local nets. NWOTW is normally a scripture or a single word, often accompanied by a two-digit number.

### 4.6b AIB (AmRRON Intelligence Brief):

Transmitted from AmRRON National **each Monday** at:

14.110 usb at 2000z, and again;  
7.110 usb at 2030z, normally in MFSK-32.

A very condensed, Real-world intelligence report highlighting one or two recent developments as it relates to cyber or terrorism threats, security issues, socio/political/economic threat indicators, and emergency communications related news or announcements.

The AIB is intended to be passed along on the Persistent Presence Net by coordinating with other stations on the net, and is also to be distributed by Net Control Station operators during all scheduled practice nets.

### 4.6c VERICODE PROJECT

During National Net weeks, a ‘**Vericode**’ is included at the bottom of the Weekly AIB. This numerical Vericode is **the first half of the password** needed to decrypt the text on the Partisan Operator Journal page.

**AIB Supplemental Vericode:** Four-digit alpha portion of the Vericode, which must be combined with the AIB Vericode to complete the weekly password. Available **ONLY** during regularly-scheduled practice nets, and by relay for one hour after the scheduled net has ended. May only be passed over radio (no internet-based amateur radio service, such as Winlink, Echolink, etc).

Go to: <https://amrron.com/nets-regional-national/taprn-regional-net/aib/>

## 4.7 Activation Alerts - ('Alerts')

Alerts are very short exercises with **no prior announcement or advanced warning**. In most cases they would simulate an abrupt, instantaneous major event and would normally result in an AmCON-1 readiness condition level.

Notification of Alerts will be via: Persistent Presence Net, the website, social media, the AmRRON Team App, and the Z-Net (AmRRON Corps only).

**Objective:** Take to the airwaves and follow instructions.

## 4.8 T-REX and other Scenario-Based Exercises

AmRRON also conducts major regional and national scenario-based exercises, such as the annual TEOTWAWKI Readiness Exercise (T-REX). T-REX is a nationwide (and beyond) simulated grid down emergency preparedness exercise, normally held in late July. In these exercises news, intelligence, reports, and updates related to the ongoing simulated emergency are made available over the air by radio. The exercise traffic is developed prior to the exercise and injected by volunteer 'Initiating Stations' at predetermined locations and times to add realism to the progression of events.

Check [www.AmRRON.com](http://www.AmRRON.com) periodically for T-REX updates and announcements.

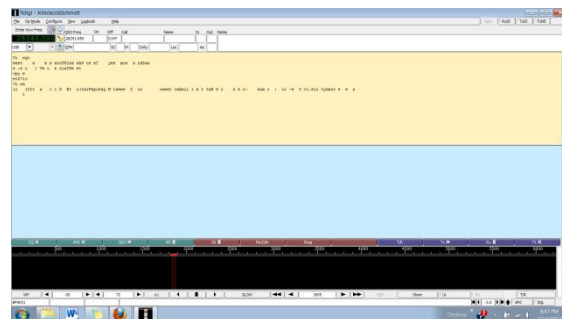
## SECTION 5 Digital Mode Operations

### Why Digital Modes?:

- More efficient, longer distances with less power/bandwidth
- Accurate transfer of forms, files, reports, etc.
- More Private compared to voice, requiring software and proficiency to decode
- Superior performance in weak signal or poor band conditions

### DIGITAL MODE OPERATIONS: GENERAL GUIDANCE

This section is designed to instruct operators who are already familiar and have a working knowledge of digital software as to which frequencies, modes, and configurations to use, and other useful information. It is NOT designed to teach the new individual operator *how* to set up or become familiar with digital communications software.



Resources are listed here for the self-motivated new operator who wishes to learn about, locate, set up, and practice with various digital modes prior to T-Rex or the next real-world communications emergency.

- AmRRON Nets normally begin using FLDIGI program, in Contestia 4/250 mode
- NCS will commonly switch to MFSK-32 for sending reports and forms
- FLMSG is used for sending preformatted and filled out forms
- FLAMP has Forward Error Correction (FEC), and is used for sending files
- JS8Call weak signal mode and Commstat STATREP and messaging dashboard

Go to AmRRON.com, in Search box, type: '*FLDIGI*' and/or '*Digital*'

Multiple resources, tutorials, and postings with embedded videos.

<https://amrron.com/2017/03/23/fldigi-tutorials-videos/>

<https://amrron.com/?s=Digital>

For **JS8Call** and **Commstat** download, setup, and operation, go to:

<https://amrron.com/2023/03/26/js8call-and-commstatone-comprehensive/>

## 5.1 Digital Mode Software Programs

| Software Program | Primary uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>*FLDIGI</b>   | <p>The Swiss Army Knife of digital communications.</p> <p>Download and use this program if nothing else. This is <b>the most commonly used</b> digital mode program during AmRRON nets and should be the first program you set up.</p> <p>It is used for sending text back and forth, just like an online chat room, as well as sending files, images, etc.</p> <p>Capable of sending/receiving multiple modes and is a full featured suite, known as the FLDIGI Suite (See FLMSG and FLAMP below).</p> <p>All scheduled digital nets will begin with fldigi using Contestia 4/250 mode. The MFSK32 mode is the primary mode for sending files.</p> <p>Net control will direct the net to switch modes when the time comes.</p> |
| <b>FLMSG</b>     | <p>Used for sending preformatted forms which open up as html forms in your internet browser.</p> <p>Works with FLDIGI. Open FLDIGI first, then FLMSG.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>FLAMP</b>     | <p>Used for sending error-free files, including FLMSG forms, and larger files can be sent using compression.</p> <p>Works with FLDIGI. Open FLDIGI first, then FLAMP.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>JS8Call</b>   | <p>JS8 weak signal mode is the primary mode used during Persistent Presence Nets. Ideal for low power or poor band conditions.</p> <p>Used for: Beacons (Heart-beating); determining path quality between you and other stations; determining band conditions; sending short messages to individuals and groups; can receive signals from multiple stations simultaneously.</p>                                                                                                                                                                                                                                                                                                                                                 |
| <b>Commstat</b>  | <p>Developed by AmRRON, for AmRRON, for submitting formatted STATREPs, and aggregating received STATREPs. Generates a color-coded dashboard and map, generates reports, and more.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>FSQcall</b>   | <p>Also used for sending files and images, as well as direct text messaging to individual stations. Used for beaconing and determining path quality between stations. Very robust texting.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>vARIM</b>     | <p>Used VARA mode, primarily for file transfers between Coordinating stations and Net Control Stations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 5.2 DIGITAL MODE OPERATIONS

### 5.2.1 FLDIGI Digital Modes:

#### \*WATERFALL: 900 Hz

##### A. CONTESTIA 4-250 (PRIMARY OPERATING MODE FOR AmRRON NETS)

USED FOR: Scheduled nets and net check ins, general communications use by NCSs for beginning HF digital nets, and for operators to make contact and communicate with the rest of the AmRRON Network.

##### B. MFSK-32 (and sometimes MFSK-64):

USED FOR: Sending forms, images, and files (such as when using FLMSG or FLAMP). NCS may choose to switch to an MFSK mode for general use during nets if band conditions favor it.

#### Pro tip:

**\*Alternate digital net frequency configuration.** For stations experiencing loss of data at 900 on the waterfall due to operating on the edge of the band pass, adjusting the frequency (shown below) and operating at 1500 on the waterfall will place the signal at the center of ***your*** band pass, and appear at 900 on the waterfall for other stations. Technique suitable for FLDIGI nets. **NOT** for use on Persistent Presence Net.

14109.4 @1500 on waterfall

7109.4 “ “ “ “

3587.4 @1500 on waterfall

### 5.2.1.1 FLDIGI Settings:

---

#### **Config>Misc>NBEMS interface**

NBEMS data file interface [check]

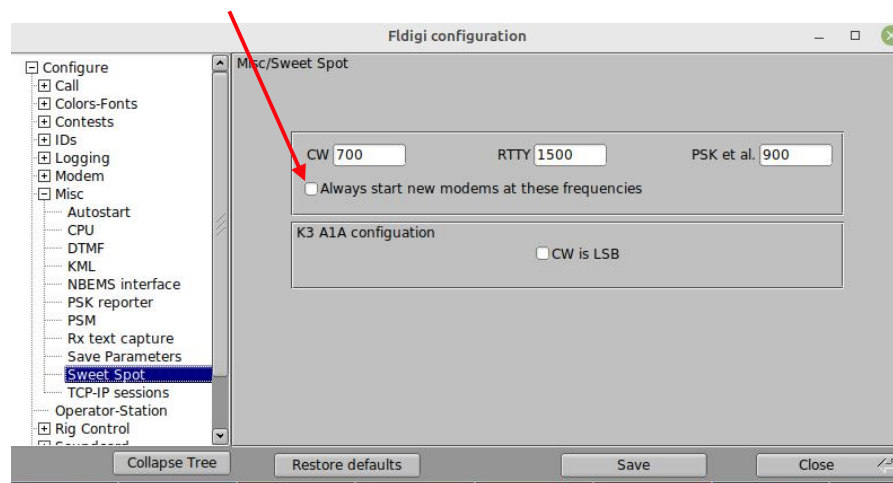
Open with flmsg [check]

Open in browser [check/uncheck – personal preference]

#### **Config>Misc>Sweet Spot**

Most AmRRON ops will advise **unchecking** the box labeled '**Always start new modems at these frequencies**'

**UNcheck**

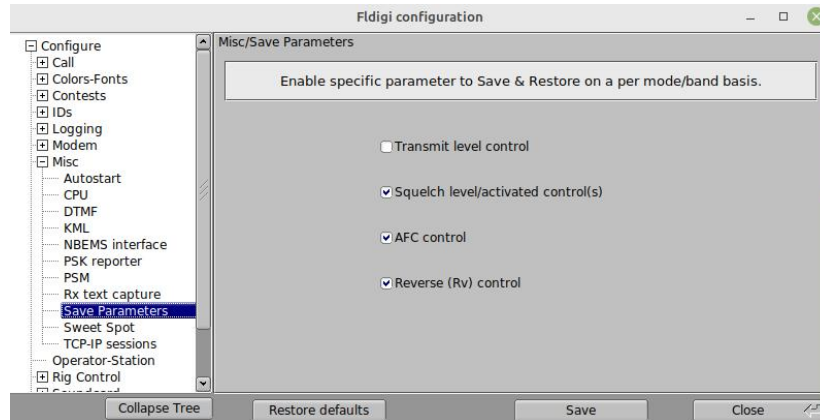


#### **Saving your configurations by band and mode:**

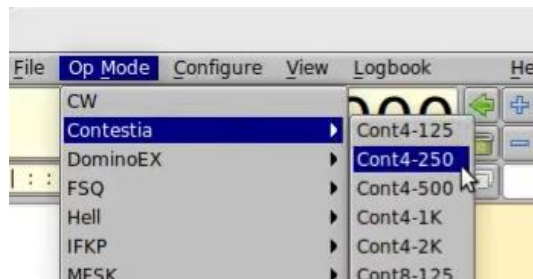
You'll want your squelch settings, mode settings, etc. to remain the same after you get them dialed in.

This is normally used for Rig Control, but even if you're using an external sound card, these settings will help you sort logs and ensure your band/mode settings are loaded when changing frequencies and modes.

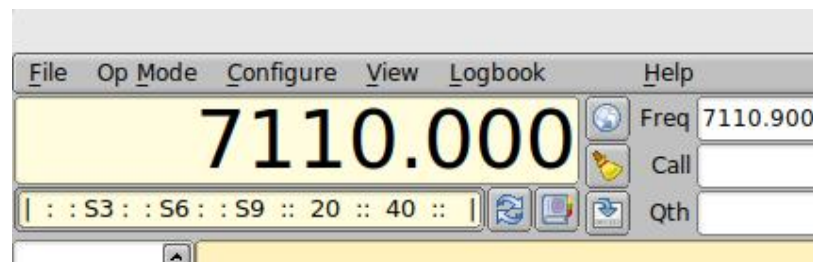
Check the following parameters before continuing:



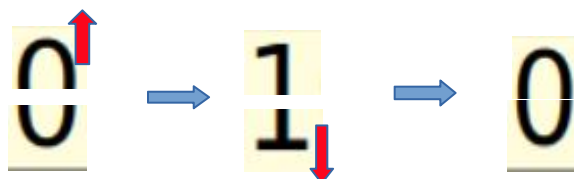
1. Select the Op Mode (in this example, Contestia 4/250)



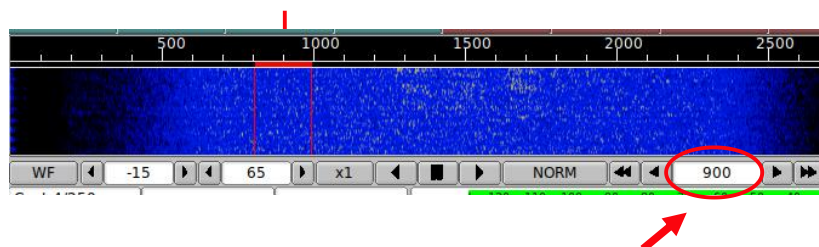
2. Select the frequency



Click on upper half of the number to increase. Click on lower half of the number to decrease.



3. Point the mouse at 900 on the waterfall, and left click.



Your precise location on the waterfall is indicated below the waterfall. If you're not at the desired location, use the  and  buttons to adjust to the desired setting.

4. Adjust your squelch to the optimum setting:



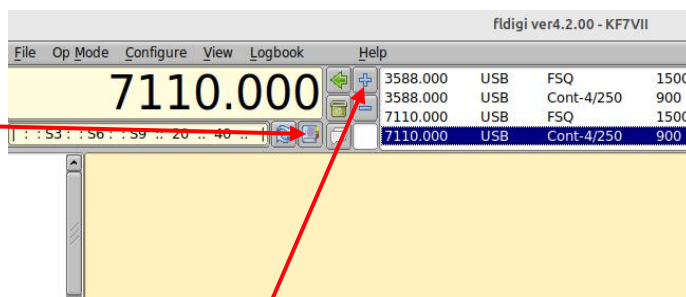
The vertical green squelch level indicator will normally fluctuate (bounce) up and down, even from atmospheric noise when a signal isn't present.

Using your mouse, while not receiving a signal, grab the slider button and move it up just above the noise level, until your SQL indicator changes from Green to Yellow.

When receiving a signal at 900 on the waterfall, the squelch level indicator will rise above the slider button and the SQL will turn Green. If you see a signal on the waterfall and are not decoding text, check your squelch slider button level to ensure you're not squelching out the signal.

5. Now add the frequency, mode, and waterfall location to your saved frequency list.

Click the 'Book' icon to Open the List



Click the '+' icon to add the freq, mode, and wf location.

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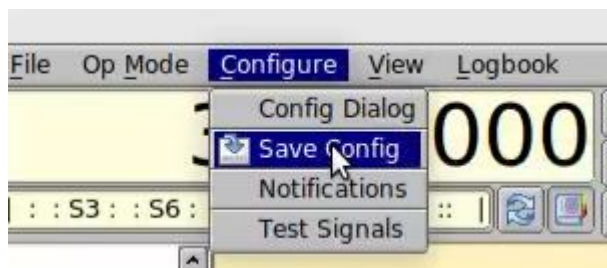
## 6. Uncheck **Rv** (Reverse) and AFC



Do this for all of the SOI frequencies, and frequencies/modes.

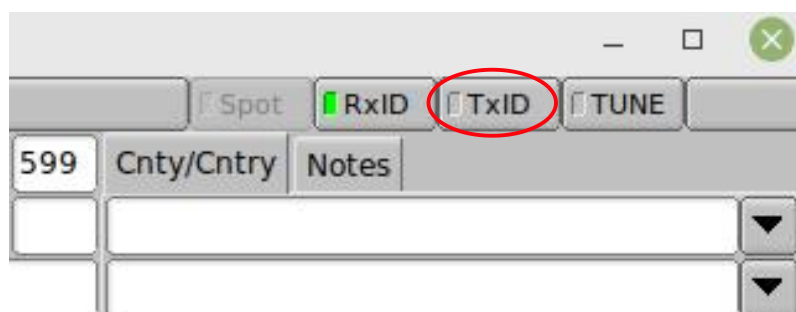
## 7. Save configuration

After this, you can select the freq, mode, waterfall location, and squelch settings by selecting from the List you've saved by double-clicking on the desired item.



Turn TxID **OFF** (uncheck/gray) during nets.

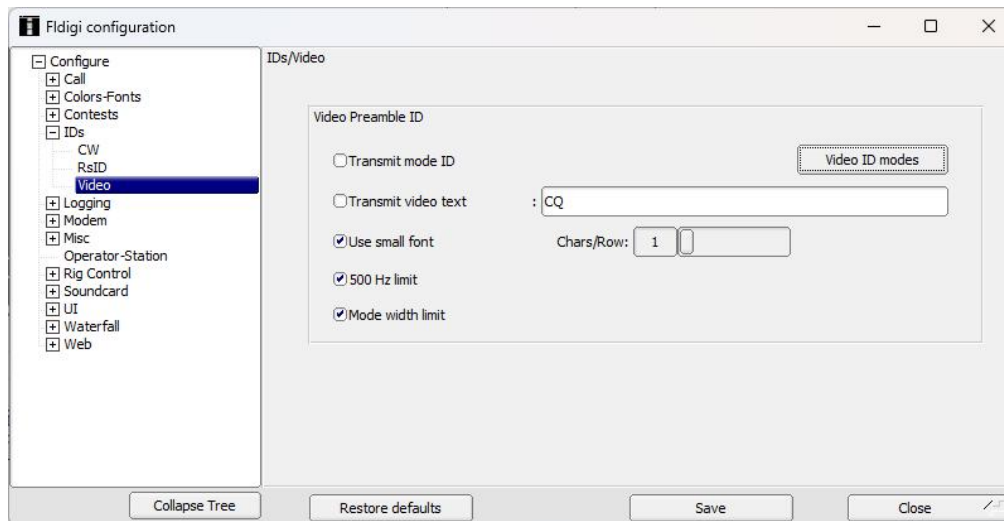
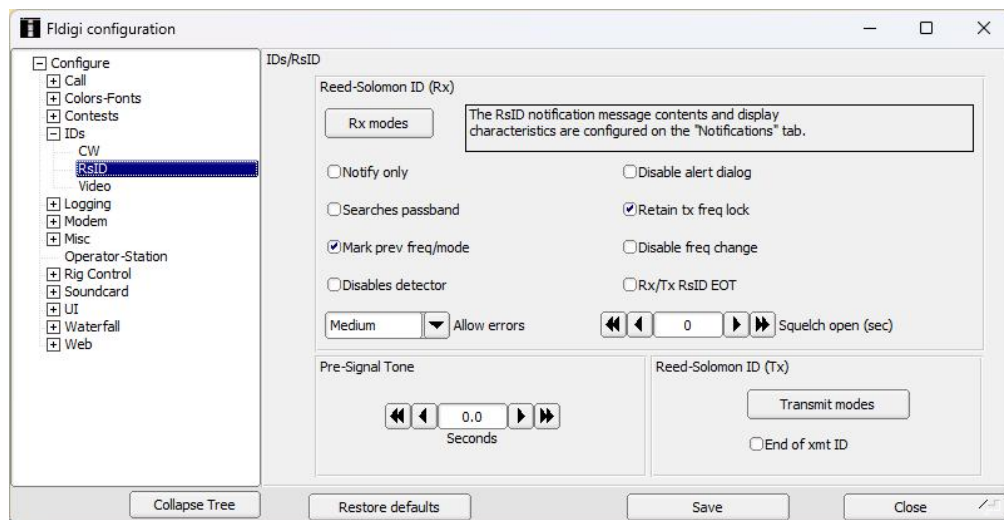
NCS (during nets) and stations sending traffic (when there's not an active net) will leave this ON (Green) to assist with changing receiving stations' modes to match the mode with which traffic is being sent.



**SPOTTING: Turn OFF (uncheck) PSK Reporter spotting while operating on AmRRON SOI frequencies.**

### Settings found at Config>Misc>Spotting

**RsID settings:** RsID automatically changes modes per the received TxID when enabled. Do **not** transmit end tones, End of xmt ID, or video IDs as these are a distraction to NCS and the net.



## ***WHERE DID IT GO? When you receive a...***

**MESSAGE** (a form in FLMSG): It's in your nbems>ICS>messages folder. In FLMSG, click on the 'File' tab in the upper left, then click 'Folders', then open the 'ICS' folder, and then the 'Messages' folder. The same if you generate a report using a form in FLMSG... it is saved in the messages folder.

**FLAMP FILE:** If you received a FLAMP file, it's in your nbems>rx>[today's date folder]. In FLAMP, click the 'File' tab in the upper left, then click 'Folders', then open the 'FLAMP' folder, and select the 'rx' folder, and then the folder labeled by the date the traffic was received. A folder is automatically created and all the files you receive or send on that date are automatically saved there.

**IMAGE:** If you received an image/picture in fldigi, it's in your fldigi>images folder. In FLDIGI, click on the 'File' tab in the upper left, then click 'Folders', then 'Fldigi config...', and then the 'images' folder.

### **5.2.1.1a MACROS: Creating, Editing, and Using macro buttons**

**The use of macro buttons makes for an efficient method for transmitting commonly transmitted information, reducing the amount of manually typing text, or conducting tasks.**

**Option 1:** Download and import macros from the website, with full instructions

#### **[New AmRRON Macro Set Released – 2022 V2](#)**

**Option 2:** Manually create/edit macros:

First, in fldigi, select the 'View' tab and select 'View/Hide 48 Macros'. The macro buttons should appear as follows:

|         |       |       |        |        |         |       |  |      |       |    |    |
|---------|-------|-------|--------|--------|---------|-------|--|------|-------|----|----|
| RslD CQ | ANS   | QSO   | KN     | SK     | Me/Qth  | Brag  |  | T/R  | Tx    | Rx | TX |
| C Ans   | C rpt | C Rep | C Incr | C Decr | Log QSO | CW-CQ |  | CQ + | CQ-ID |    |    |
|         |       |       |        |        |         |       |  |      |       |    |    |

## Create a new macro to load for daily operations:

Select 'File' tab, and then 'Macros', and 'Save'. You will be prompted to save this set of macros as an .mdf file. Name the macro set as **DailyOps.mdf**, and select 'Save'.

Preparation. Create .txt (text) files, the contents of which will be transmitted from inside a macro.

Select File>Folders>Fldigi Config...

Open the Macros folder

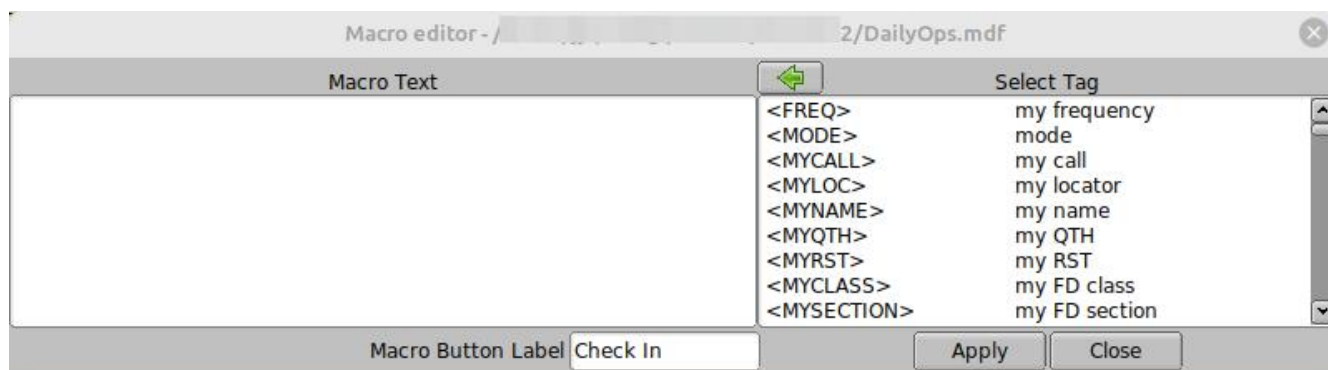
Create two .txt files, and label them NWOTW.txt (Net Word Of The Week) and ABBR\_STAT.txt (Abbreviated STATREP). Save them in the Macros folder.

Your macros folder should look something like this:



## Now create a macro button for checking in to a digital net:

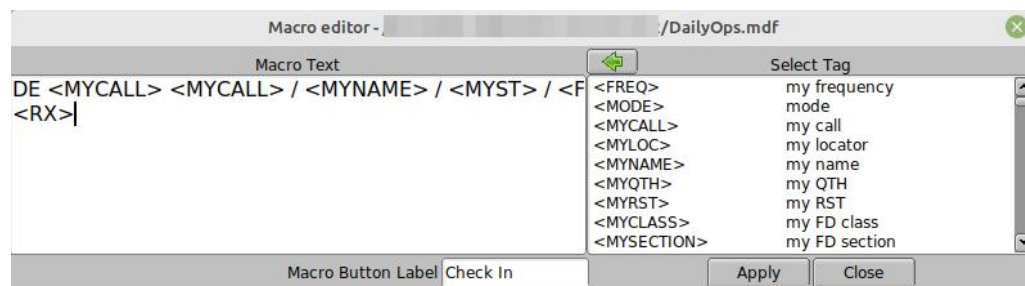
### 1. Label the button 'Check In' and click 'Apply'



2. Copy/paste or type the following text into the Macro Text field:

DE <MYCALL> <MYCALL> / <MYNAME> / <MYST> / <FILE:...  
fldigi/macros/NWOTW.txt>

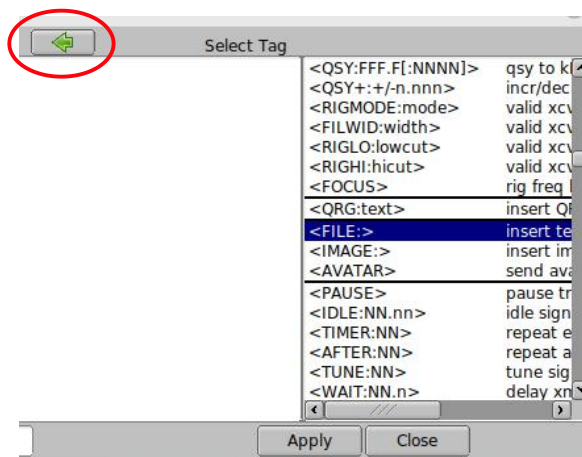
<RX>



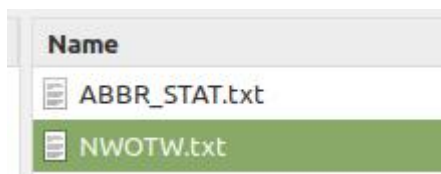
3. Add the file path to your NWOTW.txt file. First, **delete** the sample text file path:

<FILE:... fldigi/macros/NWOTW.txt>

Replace with the correct file path by placing your cursor where the sample text file path was, and then scroll down the 'Select Tag' menu until you find <FILE:>



Click on the <FILE:> and then the green left arrow at the top of your macro editor. This will open up the fldigi folder. Navigate to your .txt file in the **'macro'** folder where you created your .txt files.



Check to ensure the correct file path is in your net Check In macro field.  
Mine looks like:

```
DE <MYCALL> <MYCALL> / <MYNAME> / <MYST> /  
<FILE:/home/jjs/.fldigi/macros/macros-2/NWOTW.txt>  
  
<RX>
```

Click ‘Apply’ and then close. Be sure to resave your macro using File>Macros>Save It will ask if you want to overwrite the existing macro file name. Click Yes (unless you’re creating an entirely new macro set. In that case, rename it to whatever you want).

Double clicking the macro will load it into your fldigi transmit (blue) pane. When the frequency is clear, transmit your check in by clicking on the **T/R** button, or right click in the field and select ‘Transmit’. The contents of your .txt file(s) will be transmitted.

If you set up your call sign, your name, and your state, and have added the Net Word Of The Week to the text file (and saved), your check in on a regularly-scheduled practice AmRRON net will look something like:

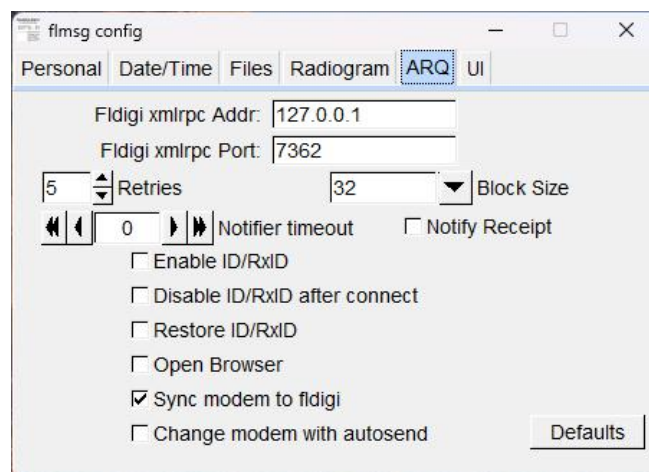
```
DE NOBDY NOBDY / JIM / TX / PSALM-93
```

If you have traffic to pass, you would list that by number of pieces of traffic, and precedence:

```
DE NOBDY NOBDY / JIM / TX / PSALM-93 / 1-RR (one piece of  
Routine –‘RR’ – traffic)
```

### 5.2.1.2 FLMSG Settings:

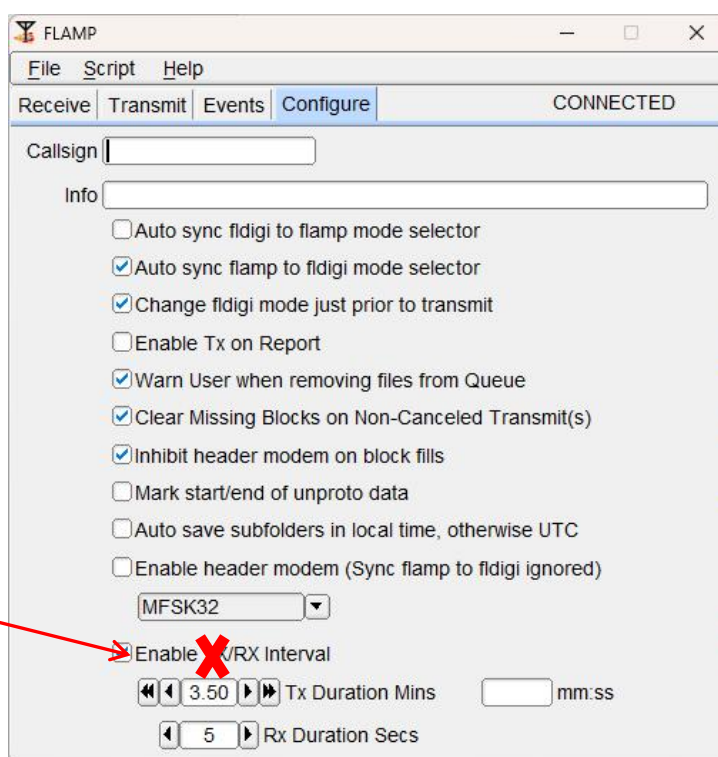
Check 'Sync modem to fldigi'. Ensure that all of the ID/RxID settings are **off** (unchecked).



### 5.2.1.3 FLAMP Settings:

**Flamp settings:** Auto sync flamp to fldigi mode selector should be checked and Enable Tx on Report should be **unchecked**.

**Uncheck** 'Enable TX/RX interval'. It is not necessary unless you are sending over a repeater with a timeout setting at xx minutes/seconds. Then breaking periodically may be necessary to allow the repeater timeout timer to reset.



Below are additional programs and modes commonly used by AmRRON Operators:

---

### 5.2.2 FSQcall stand-alone program, or FSQ 4.5 (in FLDIGI):

<https://amrron.com/wp-content/uploads/2020/02/FSQ-Training-101-1.pdf>

**WATERFALL: 1500** (by default)

- A. Open a second instance of fldigi and select [FSQ 4.5 mode](#), or;  
Download and operate stand-alone [FSQcall](#) Program.
- B. FSQ is excellent for exchanging quick chat messages between operators, beaconing, and determining path quality between operators, and for sending/receiving files. Excellent for station-to-station coordination.
- C. In most cases, the signal dB report in FSQ (or FSQCall) will give you a more accurate path quality for determining reliability between you and other stations in other modes as well, such as Contestia, MFSK32, gARIM/ARDOP, etc.. JS8Call (below) mode may not reflect the a realistic path quality for FSQ and other modes.

Learn more at: <http://fsqcall.org/>

### 5.2.3 JS8Call

<https://amrron.com/2019/12/04/white-paper-js8call-settings-for-amrron-ops/>

Each operator should keep an abbreviated STATREP current, updated at least once a day, and stored in their JS8Call Station Info and FSQ QTC fields, for other stations to query your status, especially if you are unattended.

Be sure to precede the abbreviated STATREP with 'STAT' and the DTG indicating when you last updated your STATREP.

<https://amrron.com/2019/10/23/js8call-training-resources/>



## General JS8Call Guidance:

1. Set up your station information in Settings>General>Station.
2. Adding and updating your abbreviated STATREP to Station Status field:
  - a) Maintaining an abbreviated STATREP allows other stations to query your station to ascertain your status (power, water, communications, etc). It is simply a snapshot of your situation at your location.

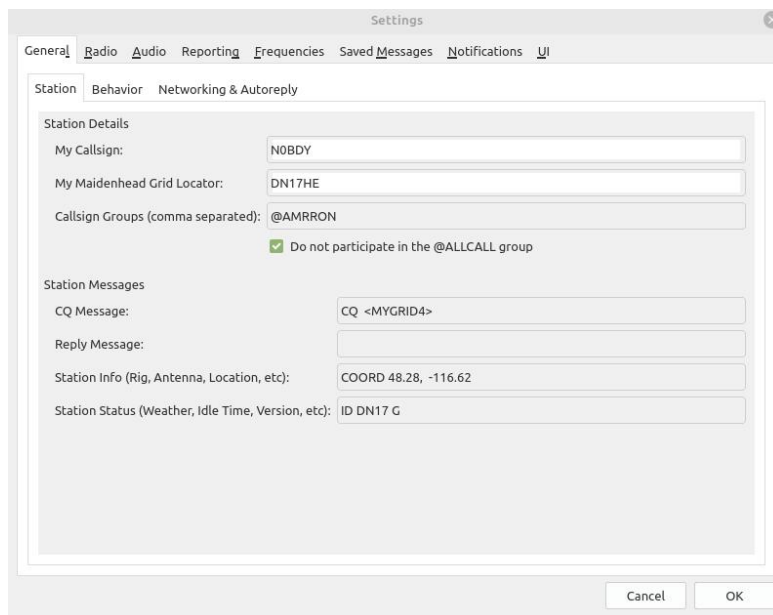


Figure 1

### b) **Add your abbreviated STATREP**

to the Station Status field by going to: File > Settings > General > Station

Optionally, you may wish to add your general location grid coordinates in the Station Info field. This can be a lat/long with .XX (two digit after the decimal) to provide similar accuracy as a six-digit Maidenhead Grid Locator (which is accurate to within several miles).

## 3. Adding Callsign Group:

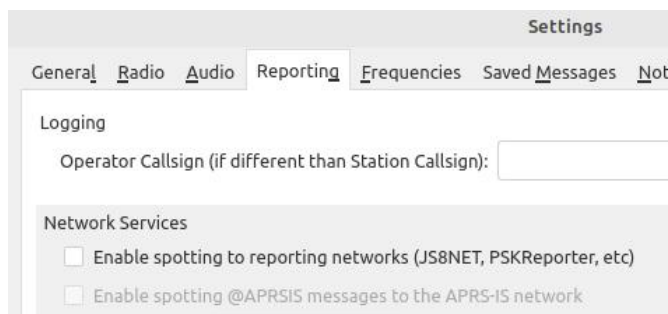
- a) Sharing information between AmRRON members over the air. You can create groups to which you can direct messages or make queries for information, to and from that group only.

To be part of the AmRRON group, simply add @AMRRON to the 'Callsign Groups (comma separated)'

- b) Go to File > Settings > General > Station and add @AMRRON

You must include the '@' symbol. (See Figure 1)

**NOTE: In JS8Call Settings>Reporting Turn Reporting OFF**



(unchecked) while operating on the AmRRON SOI frequencies.

4. Turn off Reporting by unchecking all boxes under 'Network Services'

Uncheck the Spot button (upper right-hand corner of JS8Call). Will turn button from Green to Gray.

5. Add AmRRON digital mode frequencies to JS8Call frequency page:

a) Go to File > Settings > Frequency

Hover over each band and 'Right' click (See Figure 3)

b) Select 'Insert...' from the drop down menu, and add:

14.110 (20m band)  
7.110 (40m band)  
3.588 (80m band)

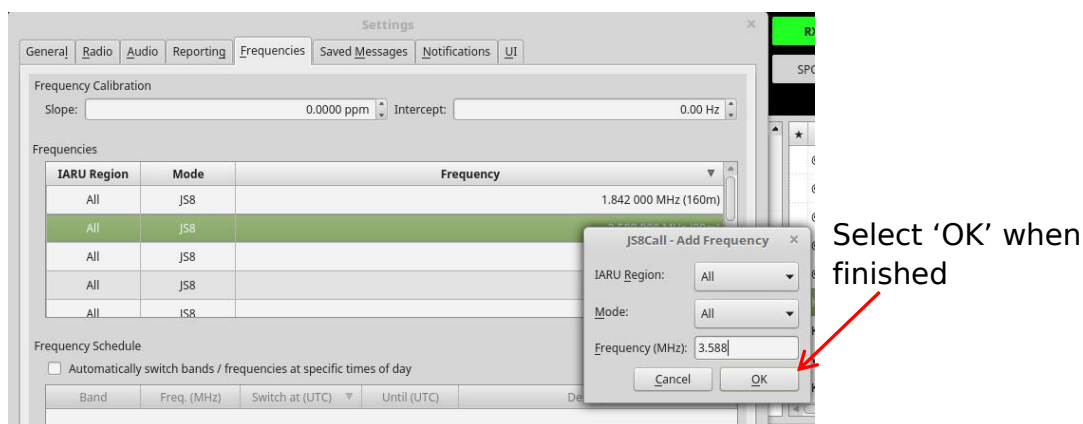


Figure 3

**NOTE:** Your activity is logged in JS8Call by band, so even if you are not using rig control, it is still helpful to switch the displayed frequency on the main JS8Call window. This helps separate on-air activity by band in your logs, for later review when you are trying to determine band path quality and activity between yourself and other stations.

In your JS8Call program, see Log --> ALL.txt

#### 6. Settings for waterfall location:

AmRRON JS8 operations should only take place between 1900 and 2500 on the waterfall. This is done to avoid interfering with traffic using other modes at 1000 and 1500 on the waterfall.

You can set your preferred waterfall location in JS8call by editing the 'Center' field (see Figure 1)

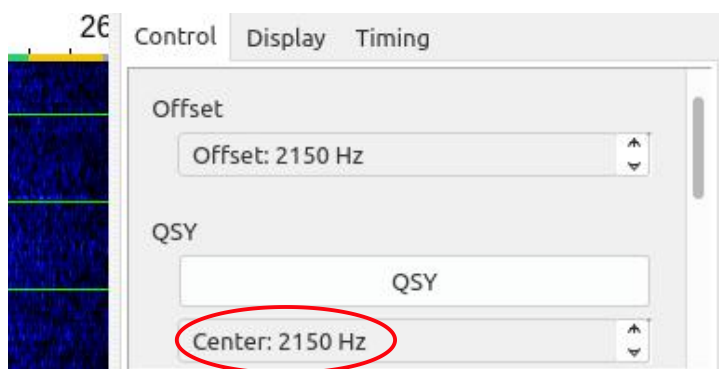


Figure 1

To do this, type your desired offset (in Hz) value in the QSY field, under the Control tab (lower right-hand corner of your JS8Call main screen. After that, if you bump over to a different place on the waterfall, you simply click on the QSY button and it will automatically place your waterfall position at the value you chose (between 1900 and 2500).

#### 5. Tips and guidance for AmRRON operators using JS8Call

- Be sure to turn HB+ACK and AUTO features **OFF** prior to scheduled nets.
- It is advisable to simply turn the TX off (gray) during nets, or if your station will be unattended during a net.
- Do **NOT** send manual queries (such as a SNR -- Signal Report -- query) to the group (@AMRRON) during a net. This causes other stations to auto respond resulting in missed net traffic.
- Turn the **SPOT** feature off. It is the button toward the upper right-hand corner of your main JS8Call window.
- Some AmRRON stations add a slant and a letter after their call sign. This indicates [call]/n a Net Control Station. They do this to help recognize each other more easily on the air, as they are tasked with specific roles for passing traffic across the network. If you are not an NCS station, do not place a /letter after your call sign.

**Exception:** If you are mobile /m or portable /p this is perfectly acceptable.

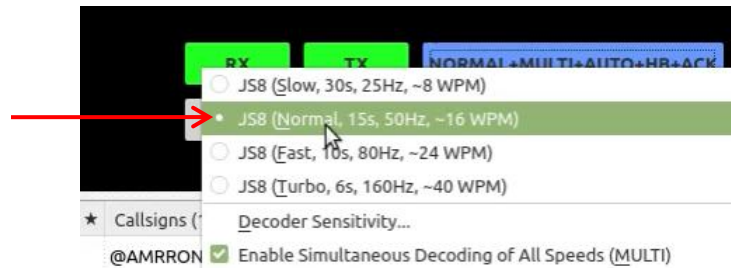
Under most circumstances, you should set any automatic Heartbeat (beacon) intervals at no more than once per hour.

## 6. Control Button Settings

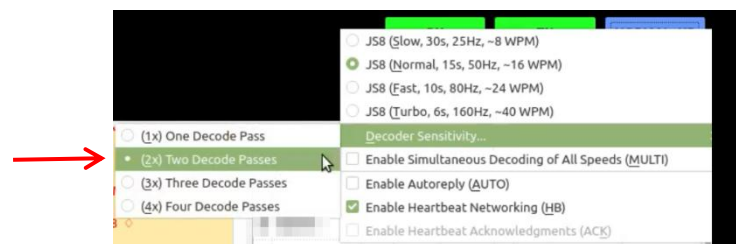
Begin by right-clicking on this button in JS8Call →



Set decoding speed to Normal



Set decoding sensitivity to 2x Passes

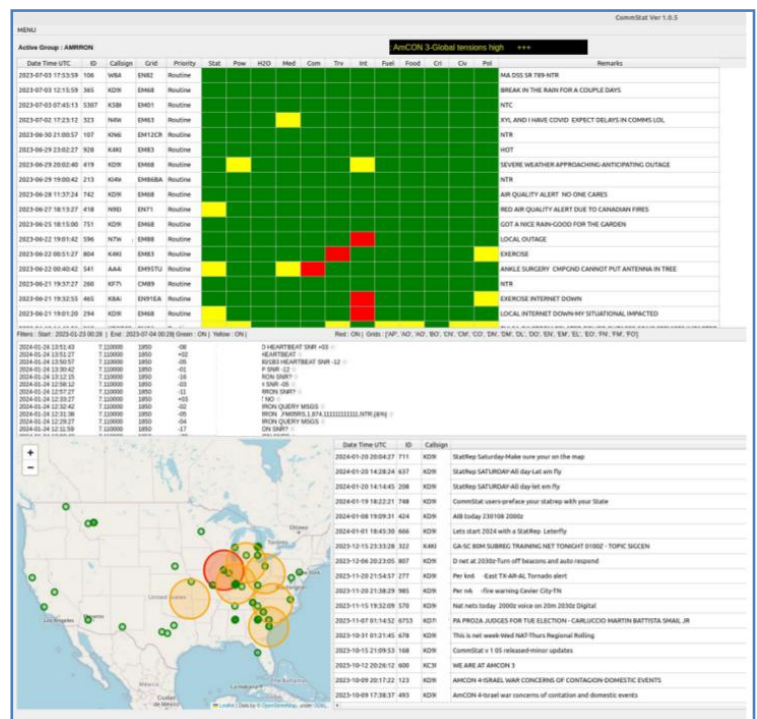


Other settings are based on personal preference and may vary from one operator to the next.

### 5.2.4 Commstat

Commstat is an application developed by by Whiskey-55 (AmRRON Corps) as a companion application to JS8Call. Commstat was developed to serve as a “dashboard,” of sorts, for submitting STATREPs, and displaying STATREP map and content data in a visual form. Since its inception, it has evolved into a broad capability application, allowing for aggregating and exporting reports, conducting JS8Call/Commstat nets, sending bulletins, and much more.

Additional, more comprehensive training materials will be produced to help operators maximize the use of this powerful tool outside the scope of this SOI.



Only AFTER installing and setting up JS8Call, then you may install Commstat

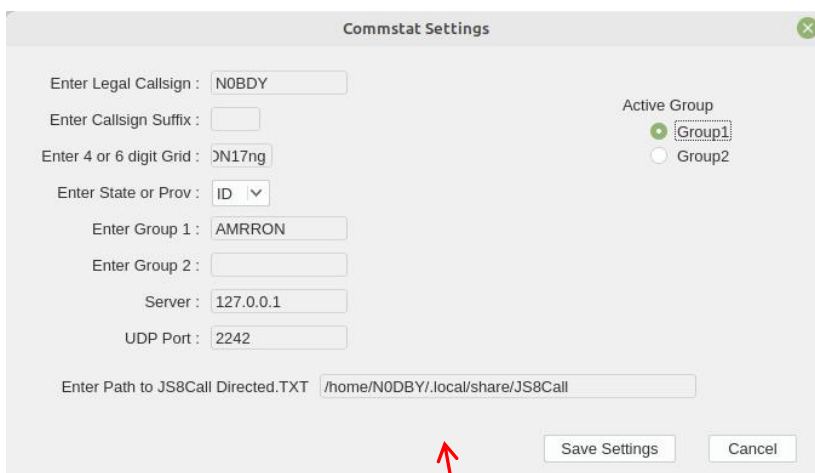
The JS8Call & Commstat Comprehensive posting has helped AmRRON operators with the download and setup of both programs.

<https://amrron.com/2023/03/26/js8call-and-commstatone-comprehensive/>

Add your callsign and grid

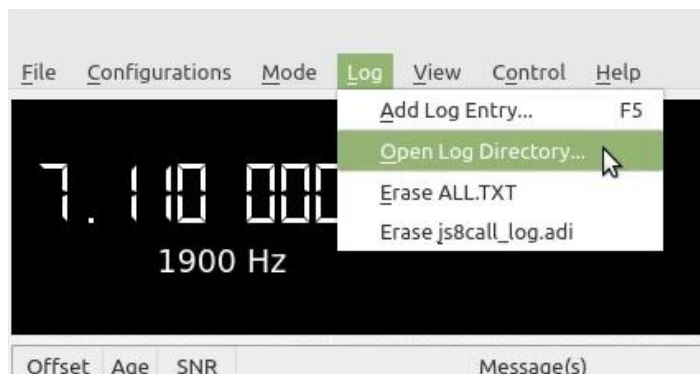
Add AMRRON group. There is an option for a second group, such as a regional group if you have one.

The Directed.TXT file is where Commstat pulls data for populating your map and dashboard.

A screenshot of the 'Commstat Settings' dialog box. It contains several input fields: 'Enter Legal Callsign' (NOBODY), 'Enter Callsign Suffix' (empty), 'Enter 4 or 6 digit Grid' (ON17ng), 'Enter State or Prov' (ID), 'Enter Group 1' (AMRRON), 'Enter Group 2' (empty), 'Server' (127.0.0.1), 'UDP Port' (2242), and 'Enter Path to JS8Call Directed.TXT' (/home/N0DBY/.local/share/JS8Call). There are radio buttons for 'Active Group' with 'Group1' selected. 'Save Settings' and 'Cancel' buttons are at the bottom right.

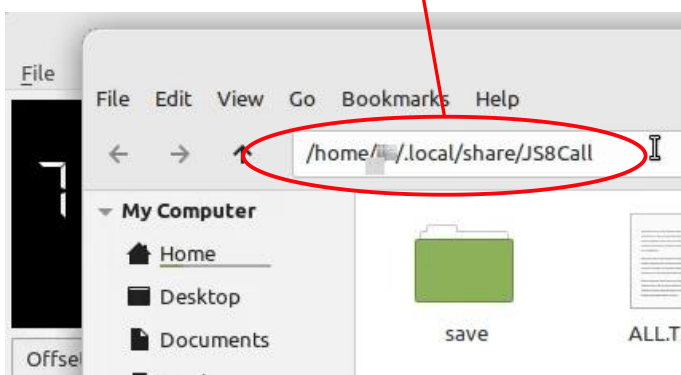
**To find the correct file path, open up your JS8Call program.**

Click on the **Log** tab, then **Open Log Directory...**



There's your file path! Copy/paste it into the file path field in Commstat Setup

The sample is from a Linux computer. The file path format will appear different on Windows systems.



#### 5.2.4.1 Commstat - Best Practices

##### ● **Send a STATREP:**

- Upon activating your station at the onset of a real-world disaster, or other disruptive event.
- At the beginning of a communications exercise
- After changing bands (such as during the Persistent Presence Net when changing from 40 meters to 20 meters, etc.)
- If conditions in your previously submitted STATREP changes (update)
- [optionally] if you receive information from another station using another mode (if he doesn't have Commstat), you can submit a STATREP in Commstat on behalf of the other station, which adds to the situational awareness of other Commstat users.

- **Send a new STATREP only once per day if there are no changes or updates to the conditions at that location.** A best practice is to 'Forward' your STATREP. This populates your STATREP in others' Commstat, but doesn't add additional, duplicate STATREPs to those who have already received your STATREP.

##### **To 'Forward' your Commstat STATREP:**

- **Menu > STATREP ACK** (from the dropdown menu)
- Find your STATREP in the list. Click on it. (you'll see your call sign appear in the 'Selected callsign for ACK' field)
- Click '**Forward Selected StatRep**' button (bottom left)

**To learn more about downloading and setting up Commstat:**

**JS8Call and Commstat**

<https://amrron.com/2023/03/26/js8call-and-commstatone-comprehensive/>

## 5.3 DIGITAL MODE Information and resources

Experience shows that digital communications over radio (especially HF) are far superior to voice for transmitting reports, forms, and other formatted information. We use several digital modes.

THE SOFTWARE IS FREE, and the programs vary in complexity. The most common digital modes and programs can be set up and used by beginners and novice operators.

**Digital Mode Resources: IF YOU ARE NEW** (to digital mode communications)...

In the PDF version of this S.O.I., click the hyperlinks below to read the following postings. These postings are helpful for learning how to download, set up, and practice receiving digital communications, step by step.

For the printed version of this S.O.I., simply go to [www.AmRRON.com](http://www.AmRRON.com) and type the title of the postings listed below into the search box on the website.

### Titles of Postings at AmRRON.com

- How to Receive Ham Radio Digital Communications  
<https://amrron.com/2014/01/16/how-to-receive-ham-radio-digital-communications/>
- Digital Communications  
<https://amrron.com/communications-resources/digital-communications/>
- Digital Communications - A Practical Exercise  
<https://amrron.com/2014/02/14/digital-communications-a-practical-exercise/>
- So You Want To Practice Decoding Digital Modes  
<https://amrron.com/2014/02/22/so-you-want-to-practice-decoding-digital-modes/>
- White Paper: AmRRON Intelligence Brief  
<https://amrron.com/2019/06/06/aib-amrron-intelligence-brief-white-paper-07-mar-2019/>

**NOTE:** The AmRRON Intelligence Brief white paper is from 2019. The current transmission days are each Monday.

If you have difficulty with any of the links, simply go to [www.AmRRON.com](http://www.AmRRON.com) and type the title of the posting in the search box on the website.



## 5.4 WATERFALL LOCATION GUIDE

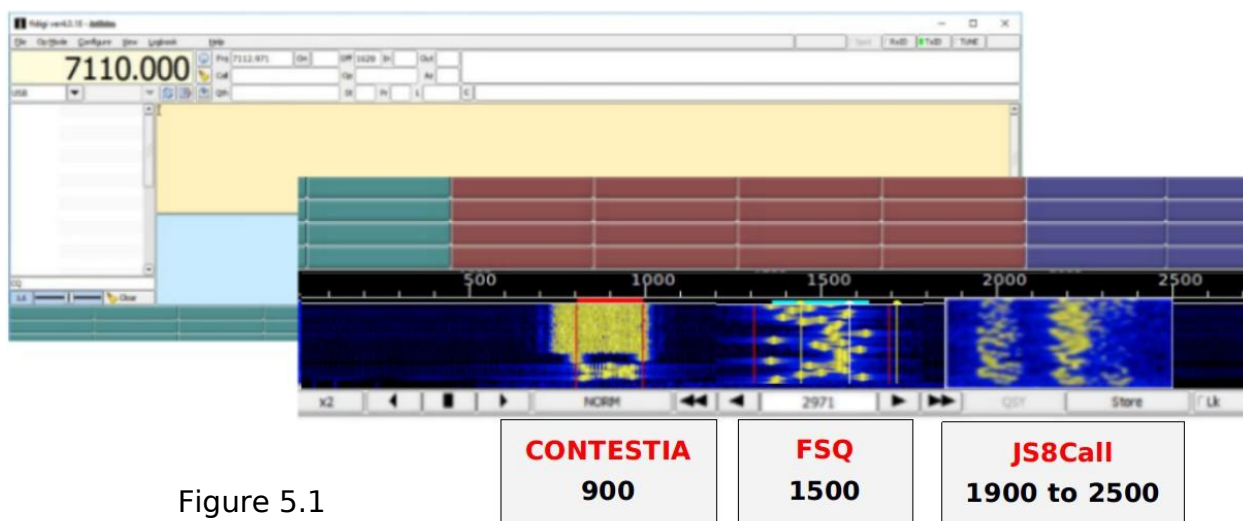
NOTE: The following applies when the operator is tuned to the frequencies as noted in the red text boxes beneath Figure 5.1.

1. **FLDIGI modes @ 900 on Waterfall**, for modes such as Contestia 4/250, MFSK-32 and MFSK-64, etc., including while sending via:

- a) FLMSG. FLMSG is used for sending completed built-in or custom forms, such as reports.
- b) FLAMP. FLAMP is the FEC (Forward Error Correcting) application we use for sending files such as .k2s or .txt files free of errors.

2. **FSQcall** defaults at **1500 on the waterfall**. Used for beaconing (sounding) for determining signal path quality and determining which stations are on the air. Is also used for transfer of small files and images, as well as chatting using short messages, and sending message alerts to individual radio operators.

3. **JS8call @ approx. 1900 - 2500 on the waterfall**. This can be done by going into File->Settings->Networking & Autoreply tab, and selecting the box which reads "Allow heartbeat transmissions outside of heartbeat sub-channel (500Hz- 1000Hz)".



Operators should select a place between 1900 and 2500 on the WF. With JS8Call, two operators can decode each other even if not at the exact same spot on the WF.

**900 on WF:** Contestia, MFSK, and other general use FLDIGI modes

**1500 on WF:** FSQ4.5 or FSQCall Sounding, text chat, and .txt file transfers

**1900-2500 on WF:** JS8Call - Heartbeating and weak signal messaging



## Section 6 Reports and Forms

Reports should be sent to others in your local network, as well as to higher up NCSs and/or SIGCENs, depending on the situation.

### Station Reports (all operators)

- **STATREP**
- **SITREP**
- **SPOTREP**

-----

### Distributed Reports (higher echelon/top down)

- **IES**
- **AIB**
- **SITREP**
- **EXSUM**
- **PSA** (Public Service Announcements)

NOTE: Effective 25 October 2023, Version 5 forms were released, and are reflected in this SOI V5.0. All previous versions are obsolete and their use discontinued.

|                                           |                                      |
|-------------------------------------------|--------------------------------------|
| STATREP   amrron_statrep_V5.00.html       | Significant changes                  |
| SPOTREP   amrron_spotrep_V5.00.html       | No changes other than V5.0 file name |
| SITREP   amrron_sitrep_V5.00.html         | Significant changes                  |
| Blank Form   amrron_blank_Form_V5.00.html | Noticeable changes                   |

You can find the new forms at: <https://amrron.com/amrron-forms/>

If you are new to AmRRON custom forms, or need a refresher on downloading and installing, go to:

<https://amrron.com/downloading-custom-forms/>

ALL Version 5 forms contain a sample file naming protocol in the header. This will aid the operator with structuring the file name after filling out a report, and increase standardization across the network:

**Sample file naming protocol:** "CALL-ST-RR-YYMMDD-HHMMZ-REPORT"

## 6.1 Station Reports (all operators)

**6.1.1 STATREP** (Status Reports) - All stations should keep a STATREP updated, and be prepared to fill out and submit all other reports when appropriate.

**STATREP** (Abbreviated and Full/non-abbreviated)

STATREPs should be sent at the onset of an event, and when there is a significant change to their initial status/situation.

**SITREP** (Situation Report) A SITREP is simply a report of a situation as it relates to a location, entity, or events. It explains what just happened, what is happening, or the current state during an event. A SITREP is issued when there are more details which need to be explained than what can reasonably be put in a STATREP (which is simply a 'snapshot' of what is happening around the individual radio operator).

A SITREP is more suitable when there is more of a *'story to tell'*.

If there is a more complex situation or more details need to be added than what the standard STATREP form allows for, then the same format can be used as a guide and a SITREP may be created using the AmRRON Blank Form, or even a text (.txt) document which can be sent over the air using FLAMP, gARIM, FSQ 4.5, PAT, ARIM, or other file transferring mode or program. Experienced operators should choose the method he thinks is the most suitable for the situation.

**SPOTREP** (also known as a SALUTE report).

This is the format for reporting enemy activity, modeled after the military reporting system which uses the mnemonic SALUTE (Size, Activity, Location, Unit/Uniform, Time, and Equipment). Disasters can create opportunities for criminal activity, and in some cases criminal elements form into organized elements and adopt military style tactics. The SPOTREP is a way to report hostile groups or individuals, especially when they pose an organized and significant risk to a community.

## 6.2 Distributed Traffic

This section briefly covers methods for distributing news, information, and intelligence from AmRRON National, regional SIGCENs, and Net Control Stations to the radio operators throughout the network.

Distributed Traffic is our effort to take raw information and intelligence, process it and organize it, and develop usable intelligence to help everyone stay informed of what is happening inside of, around, and beyond, one's immediate world (which can become very small in a grid down situation).

- **IES** Initial Event Summary
- **AIB** AmRRON Intelligence Brief
- **EXSUM** Executive Summary
- **PSA** Public Service Announcement
- **Other** Situation dependent 'other' category

### 6.2.1 IES (Initial Event Summary)

An IES is a statement prepared by Net Control Stations, Signal Centers, and AmRRON National, essentially stating *"This is what we know..."*

At the onset of a major event (especially if grid-down), radio operators will be taking to the airwaves in search of information and answers to find out what just happened.

NCSs, SIGCENs, and other seasoned AmRRON operators may not have any more information than anyone else, but people will still be looking to each of them as an "AmRRON Leader," not only with answers, but with guidance to tell them what to do next.

An Initial Event Summary (IES) will help maintain calm and give reassurance that someone is there and aware, and efforts to gather and disseminate information are already under way. These higher tier AmRRON operators will be a reassuring presence that will instill confidence in others that the network is alive and well and there for them. Net Control Stations (and higher) should update their IESs as radio operators report in with their STATREPs and SITREPs, and otherwise as additional information becomes available.

### 6.2.2 AIB (AmRRON Intelligence Brief)

The AIB is a way to distribute a brief synopsis or an aggregate report of intelligence or news which could affect you. These can be a simple bulleted list of intelligence highlights, or a short description of updates, and in any case they are designed to help you keep situational awareness during an event when the situation is continually changing.

During non-operational times, the AIB is distributed each Monday from AmRRON National, and may only be distributed by radio or courier.

Follow the link below to learn more about the AIB as it is used during non-operational times.

**NOTE:** The AmRRON Intelligence Brief white paper is from 2019. The current transmission days are each Monday.

<https://amrron.com/2019/06/06/aib-amrron-intelligence-brief-white-paper-07-mar-2019/>

### 6.2.3 EXSUM (Executive Summary)

The Executive Summary is a detailed, comprehensive report of events and may be sent out daily or weekly, or as the situation requires. SIGCENs (Regional and National) should be producing EXSUMs on a routine basis for distribution to the network, or to served entities (leadership, local government officials, community leaders, or others tasked with making decisions related to logistics, emergency response, security issues, etc.). The EXSUM is normally produced by the information/intelligence element of a SIGCEN or organization, known as the ACE (Analysis and Control Element). In the military this element is known as S2 or G2.

### 6.2.4 PSA (Public Service Announcement)

PSAs are short announcements and/or instructions to the public in an affected disaster area. These announcements normally address a specific need or hazard. PSAs give guidance related to the public's safety and well being. Examples may be updated evacuation routes, emergency shelter information, medical services, or aid and relief services, etc.

### 6.2.5 Other

Occasionally traffic may need to be disseminated to a community at the request of leaders within that community. It could be news reports, announcements, requests for support, etc., which may not fall neatly into other AmRRON-formatted distributed radio net traffic.

## 6.3 STATION TRAFFIC (Reports and Forms)

Traffic which EVERY operator should be familiar with developing and sending

- STATREP                      - 9 Line MEDEVAC Request
- SITREP                      - ICS Forms (most common)
- SPOTREP

### 6.3.1 STATREP

#### What is a Status Report?

**It is a snapshot** report -- a 'pulse check' -- to inform others of the conditions at a specific location (either at the reporting station's location, or on behalf of another location). The STATREP helps everyone understand the size, scope, and effects of a disruptive event.

The STATREP (status report) pertains to your location, as much as you are able to directly observe or experience (or ascertain and confirm through others among your local contacts).

This report (which is a modified version of the Army MARS County Status Report format) covers the status of a number of important public services in the specified area. It uses a standardized system to report status ensuring consistency in reporting. Data used in the report can come from personal observation or from personal observations collected by other MARS members, amateur radio operators in ARES or RACES groups, or knowledgeable individuals.

This general guide has been modified to fit the customized AmRRON STATREP. After corroboration among AmRRON Corps, the following changes have been made:

1. Addition of line numbers to facilitate line item Voice or Text reporting when the custom html form cannot be used.
2. The addition of the Modified Mercalli Scale for reporting damage or effects felt from earthquake or major explosion.
3. Radiological Reporting for operators with radiation detection equipment, when applicable.
4. City/County/State. Often times a station operator may not know what grid square he is in, especially if he has been forced to relocate, or is deployed to an unfamiliar area. However, he almost always knows what city (and possibly county) and state he is near/in.

## WHEN, WHY, HOW, and HOW OFTEN?

### 1. Send a STATREP (when):

#### a) Operational:

- i. When the AmRRON network is activated in response to an expected, imminent, or ongoing event.
- ii. Initiated by each operator at the onset of an unexpected disruptive event.

#### b) **On request:** by Net Control, or other parties.

#### c) **Persistent Presence Nets:** Even when not operational, it is a good practice for you and others to send a daily STATREP, and is strongly encouraged. Forward after changing bands.

### 2. Why send a STATREP?

- a) As a pulse check to let others know you are on the air, as well as the conditions at your location (or the conditions at another location you may be reporting on behalf of).
- b) To alert others to trends, patterns, and conditions for his/her overall situational awareness.

### 3. HOW to send a STATREP:

**There are several ways. Here they are in order of preference:**

- a) Commstat (preferred and primary method) for those with Commstat.
  - i. STATREP Submit feature to send a new/updated report, or;
  - ii. \*Forwarding feature, to transmit an existing STATREP
- b) FLMSG custom AmRRON STATREP Version 5 form (alternative).
- c) Plain text format (contingency method) for stations who do not have Commstat or FLMSG custom AmRRON forms, or who are reporting over voice, text, CW, or other methods.

### 4. HOW OFTEN?

- a) At the onset of an event or activation.
- b) When updating a STATREP due to changed conditions
- c) When changing bands (Commstat forwarding feature is ideally suited), such as during the Persistent Presence Net throughout the day.

**\*Commstat Forwarding:** From the '**Menu**' tab, select the '**STATREP ACK**' from the dropdown menu. Then click on the STATREP you wish to forward, and then click the button labeled '**Forward Selected StatRep**'.

**NOTE:** The flmsg Custom AmRRON form and the Commstat form lines 6 through 18 are the same. Line 6 in the flmsg Custom form reads 'Map Pin', but is the same as the 'Status' field in the Commstat form. The color (G-Y-R) in this field should reflect the most degraded category condition in fields 7 through 17.

*"When Everything Else Fails. Amateur Radio often times is our last line of defense...When you need amateur radio, you really need them."*

**The Hon. W. Craig Fugate**

Administrator, US Department of Homeland Security, FEMA

### 6.3.1a STATREP (Commstat)

#### Commstat STATREP

| <b>AmRRON Status Report</b>                                                                                                                                                   |                                                                       |                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------|
| <i>v4.0 Use this form to report general conditions at a specified location or region based on personal or reliable sources.</i>                                               |                                                                       |                                                                         |
| <b>1a. To:</b> <i>(Recipient)</i><br><input type="text"/>                                                                                                                     | <b>1b. From:</b> <i>(Sender)</i><br><input type="text"/>              | <b>2. Message Priority:</b><br>Routine <input type="button" value="v"/> |
| <b>3. StatRep ID:</b> <i>(Last 3 of call &amp; #)</i><br><input type="text"/>                                                                                                 | <b>4. State:</b> <i>(State)</i><br><input type="text"/>               | <b>5. Grid:</b> <i>(Of reported locaton)</i><br><input type="text"/>    |
| <b>6. Status:</b> <i>(Of residents at locaton)</i><br>Green <input type="button" value="v"/>                                                                                  | <b>7. Commercial Power:</b><br>Green <input type="button" value="v"/> | <b>8. Public Water:</b><br>Green <input type="button" value="v"/>       |
| <b>9. Medical:</b><br>Green <input type="button" value="v"/>                                                                                                                  | <b>10. Over Air Comms:</b><br>Green <input type="button" value="v"/>  | <b>11. Travel Conditions:</b><br>Green <input type="button" value="v"/> |
| <b>12. Internet:</b><br>Green <input type="button" value="v"/>                                                                                                                | <b>13. Fuel:</b><br>Green <input type="button" value="v"/>            | <b>14. Food:</b><br>Green <input type="button" value="v"/>              |
| <b>15. Criminal Activity:</b><br>Green <input type="button" value="v"/>                                                                                                       | <b>16. Civil:</b><br>Green <input type="button" value="v"/>           | <b>17. Political:</b><br>Green <input type="button" value="v"/>         |
| <b>18. Brief remarks:</b> <i>(If reporting conditions of a location other than your QTH, enter the City and State before any remarks.)</i><br><div><input type="text"/></div> |                                                                       |                                                                         |
| <b>End of Report</b><br><small>Revised 20230616 PRW</small>                                                                                                                   |                                                                       |                                                                         |

Instructions and descriptions of each field are contained below the STATREP form in the Commstat application.



### 6.3.1b STATREP (FLMSG)

#### FLMSG AmRRON Custom Form

| <b>AmRRON Status Report</b>                                                                                                                                   |                                                                   |                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|
| <i>v5.00 Use this form to report general conditions at a specified location or region based on personal or reliable sources.</i>                              |                                                                   |                                                                       |
| <i>Sample file naming protocol: "CALL-ST-RR-YYMMDD-HHMMZ-REPORT"</i>                                                                                          |                                                                   |                                                                       |
| <b>1a. To:</b> <i>(Recipient)</i><br><input type="text"/>                                                                                                     | <b>1b. From:</b> <i>(Sender)</i><br><input type="text"/>          | <b>2. Size and Scope:</b><br><input type="text" value="My Location"/> |
| <b>3. DTG:</b> <i>(YYMMDD-HHMMz)</i><br><input type="text"/>                                                                                                  | <b>4. State:</b> <i>(State)</i><br><input type="text"/>           | <b>5. Grid:</b> <i>(Of reported locaton)</i><br><input type="text"/>  |
| <b>6. Map Pin:</b><br><input type="text" value="Green"/>                                                                                                      | <b>7. Commercial Power:</b><br><input type="text" value="Green"/> | <b>8. Public Water:</b><br><input type="text" value="Green"/>         |
| <b>9. Medical:</b><br><input type="text" value="Green"/>                                                                                                      | <b>10. Over Air Comms:</b><br><input type="text" value="Green"/>  | <b>11. Travel Conditions:</b><br><input type="text" value="Green"/>   |
| <b>12. Internet:</b><br><input type="text" value="Green"/>                                                                                                    | <b>13. Fuel:</b><br><input type="text" value="Green"/>            | <b>14. Food:</b><br><input type="text" value="Green"/>                |
| <b>15. Criminal Activity:</b><br><input type="text" value="Green"/>                                                                                           | <b>16. Civil:</b><br><input type="text" value="Green"/>           | <b>17. Political:</b><br><input type="text" value="Green"/>           |
| <b>18. Brief remarks:</b> <i>(If reporting conditions other than your own location, enter the City and State before any remarks.)</i><br><input type="text"/> |                                                                   |                                                                       |
| <b>End of Report</b><br><small>Revised 20231024 PRW</small>                                                                                                   |                                                                   |                                                                       |

Instructions and descriptions of each field are contained below the STATREP form when opened for editing in FLMSG.

For more information on downloading, installing, and using AmRRON Custom html forms in FLMSG, go to: <https://amrron.com/downloading-custom-forms/>

### 6.3.1c Simple Text Version of STATREP

**(Follows the same line/field formatting as Commstat V4 form)**

**Text version:** If you do not have FLMSG, the AmRRON Custom forms, or if you do not have Commstat but are able to send text over radio (for example, in FLDIGI or Winlink email), a STATREP may be sent in plain text.

However, the abbreviated STATREP is much more suitable for such situations as voice, CW, or texting modes in general (See Section 6.3.2d Abbreviated Text STATREP).

1. a. **To:**  
b. **From:**
2. Message Priority:
3. StatRep ID: Last 3 of your FCC and a sequential number. If it is your first STATREP, then add a dash -1. If you send subsequent updates to your STATREP, they would follow with -2, -3, and so on.
4. **State:** 2 digits
5. **Grid:** Maiden Head grid (4-6 digits)
6. **Status:** The overall general status of the location/party being reported. This line should reflect the most degraded category of your STATREP.  
  
G (Green) = Good. Y (Yellow) = Moderate. R (Red) = Hazardous
7. **Commercial Power:** Select "Green," "Yellow," "Red" or "Unknown" to reflect status electrical grid in the location/party you are reporting.
8. **Public Water:** Select "Green," "Yellow," "Red" or "Unknown" to describe status of public water utilities.
9. **Medical:** Select "Green," "Yellow," "Red" or "Unknown" to describe availability of medical support. Doctors, hospitals, clinics, etc.
10. **Over Air** [conventional] **Comms:** Select "Green," "Yellow," "Red" or "Unknown" to describe availability of public communications such as Cellphone, TV and radio.
11. **Travel Conditions:** Select "Green," "Yellow," "Red" or "Unknown" to describe ability for road travel and transport of goods at reported location.
12. **Internet:** Select "Green," "Yellow," "Red" or "Unknown" to describe availability of internet service at reported location.

13. **Fuel:** Select “Green,” “Yellow,” , “Red” or “Unknown”to describe the availability of fuel (gasoline, diesel, propane, etc) in the reported area..
14. **Food Availability:** Select “Green,” “Yellow,” , “Red” or “Unknown” to describe the availability of food at the reported location.
15. **Criminal Activity:** Select “Green,” “Yellow,” , “Red” or “Unknown” to describe the level of criminal activity in the reported location.
16. **Civil:** Select “Green,” “Yellow,” , “Red” or “Unknown” to describe the mindset and actions of the general population at the reported location.
17. **Political:** Select “Green,” “Yellow,” , “Red” or “Unknown” to describe the mindset and actions of politicians/bureaucracies/etc. at the reported location.
18. **Brief Comments:** This is not a SITREP. Lengthy narratives are not used in STATREPs. Keep it as short as possible. Example: “Boil water order in effect”

### 6.3.1d Abbreviated Text STATREP:

This may be used when you do not have the Custom FLMSG form, or; if you're using JS8Call and do not have Commstat, or; if Net Control specifically requests abbreviated plain text versions of STATREPs.

May also be used when you must keep your messages as short as possible to conserve power, or for other reasons. It is ideal for use with JS8Call and plain text using fldigi modes such as Contestia 4/250, MFSK, etc.

- A) IF ALL CATEGORIES ARE 'GREEN' (Good to go and no disruptions or issues), send call sign, state, 4-digit grid, and 'G' (green) indicating overall status. It is assumed that all other categories are green.

For example, your if your call sign was W1XYZ, located in Indiana, and all is good:

W1XYZ IN EM77 G

- B) If you are reporting disruptions in some (but not all) categories, indicate field numbers that are Y (yellow) or R (red). All categories not listed are assumed to be 'Green' or Unknown.

W1XYZ IN EM77 Y 7R 10Y 12R

From the example above, you've listed your call sign, state (Indiana), your four digit grid square, and your overall condition is Y (yellow), Commercial Power (field 7) is red (complete disruption); Over-Air Comms (field 10) is yellow -- Example: no cell but commercial radio working; and internet (field 12) is red (complete disruption).

In cases with partial disruptions, you may add a brief comment.

For example: "No Cell."

#### Over digital/text modes:

W1XYZ IN EM77 Y 7R 10Y 12R NO CELL

#### Over Voice/Phone:

*"This is Whiskey One X-ray, Yankee, Zulu. My abbreviated STATREP is as follows..."*

*"Indiana. Echo Mike Seven Seven. Yankee. Seven Romeo. One Zero Yankee. One Two Romeo. No Cell. over."*

## Section 6.3.2 SITREP



### AmRRON Situation Report (SitRep)

v5.00 Use this form to report or update a situation or event in a specified location or region based on personal or reliable sources.

Sample file naming protocol: "CALL-ST-RR-YYMMDD-HHMMZ-REPORT"

|                                                                                                                                      |                                                                |                                              |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------|
| <b>1. To: (Recipient)</b><br><input type="text"/>                                                                                    | <b>2. From: (Sender)</b><br><input type="text"/>               | <b>3. Message Precedence:</b><br>Routine ▾   |
| <b>4. State (ST): (State)</b><br><input type="text"/>                                                                                | <b>5. Grid: (Of reported location)</b><br><input type="text"/> | <b>6. Size and Scope:</b><br>Local ▾         |
| <b>7. DTG: (YYMMDD-HHMMz)</b><br><input type="text"/>                                                                                | <b>8. Expiration: (YYMMDD-HHMMz)</b><br><input type="text"/>   | <b>9. Status: (Incident Status)</b><br>New ▾ |
| <b>10. Narrative: (Concisely describe the situation)</b><br><div style="border: 1px solid black; height: 100px; width: 100%;"></div> |                                                                |                                              |
| <b>End of Report</b><br>Revised 20231024 PRW                                                                                         |                                                                |                                              |

### Instructions

- TO (Recipient):** Who or what group is being addressed.
- FROM (Sender):** Your FCC Call Sign.
- Message Precedence:** Select option which best reflects priority or urgency.
- State:** 2 letter abbreviation of the State for which the StatRep is referring. (ST)
- Grid:** Maiden Head grid of location being reported. If a more specific location is required, note it in section 11 "Narrative".
- Size and Scope:** Select "Local," "Regional," "National," or "Unknown" to reflect size and scope of the event.
- DTG:** YYMMDD-HHMMz.
- Expiration DTG:** YYMMDD-HHMMz.
- Status:** Select "New," "Ongoing," "Resolved," or "Unknown" to reflect the status of the event.
- Narative:** This is the "meat and potatoes" of the SitRep. Describe in the shortest most concise report possible.



### 6.3.2-0 Modified Mercalli Scale (Earthquake or Explosion Effects Reporting)

| Modified Mercalli Scale |                                                                                                                               | Richter Magnitude Scale |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| I                       | Detected only by sensitive instruments                                                                                        | 1.5                     |
| II                      | Felt by few persons at rest, especially on upper floors; delicately suspended objects may swing                               | 2                       |
| III                     | Felt noticeably indoors, but not always recognized as earthquake; standing autos rock slightly, vibration like passing truck  | 2.5                     |
| IV                      | Felt indoors by many, outdoors by few, at night some may awaken; dishes, windows, doors disturbed; motor cars rock noticeably | 3                       |
| V                       | Felt by most people; some breakage of dishes, windows, and plaster; disturbance of tall objects                               | 3.5                     |
| VI                      | Felt by all, many frightened and run outdoors; falling plaster and chimneys, damage small                                     | 4                       |
| VII                     | Everybody runs outdoors; damage to buildings varies depending on quality of construction; noticed by drivers of automobiles   | 4.5                     |
| VIII                    | Panel walls thrown out of frames; fall of walls, monuments, chimneys; sand and mud ejected; drivers of autos disturbed        | 5                       |
| IX                      | Buildings shifted off foundations, cracked, thrown out of plumb; ground cracked; underground pipes broken                     | 5.5                     |
| X                       | Most masonry and frame structures destroyed; ground cracked, rails bent, landslides                                           | 6                       |
| XI                      | Few structures remain standing; bridges destroyed, fissures in ground, pipes broken, landslides, rails bent                   | 6.5                     |
| XII                     | Damage total; waves seen on ground surface, lines of sight and level distorted, objects thrown up into air                    | 7                       |

## Section 6.3.3 SPOTREP (Spot Report/SALUTE Report)

|                                                  |                                                                                                                 |                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <h1>SPOT REPORT</h1> <p>(SALUTE &amp; 5 W's)</p> | <b>S</b> -ize<br><b>A</b> -ctivity<br><b>L</b> -ocation<br><b>U</b> -nit<br><b>T</b> -ime<br><b>E</b> -quipment | <b>Who</b><br><b>What</b><br><b>Where</b><br><b>When</b><br><b>Why</b><br><b>How</b><br><b>(How many)</b> |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|



The Spot Report is a guide to assist with reporting hostile/enemy forces or threatening activity that you have observed. Designed as a tool to aid soldiers in reporting observed enemy activity in the military, this has been adapted to report criminal activity, invading military forces, etc. This is a combination of two reporting formats (SALUTE & 5W's). Fill everything out as soon and as accurately as possible.

|          |                                                                                                                             |
|----------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>S</b> | <b><u>Size</u></b> (Platoon? Battalion? #Vehicles #Persons)                                                                 |
| <b>A</b> | <b><u>Activity</u></b> (Convoy, Checkpoint, Patrol, Cordon, Training, Interrogation, Relocating/evacuating Citizens, Etc)   |
| <b>L</b> | <b><u>Location</u></b> (GPS/Grid Coord, address, road name/#, Direction, proximity to landmarks, nearest town, etc.)        |
| <b>U</b> | <b><u>Unit</u></b> (Domestic/Foreign, Police, Military, branch, guard/reserve, Unit Designation, civ supt, volunteer, etc.) |
| <b>T</b> | <b><u>Time &amp; Duration</u></b> (Time/Date Group: YYYYMMDD-HHMM (L-local or Z-zulu))                                      |
| <b>E</b> | <b><u>Equipment</u></b> Weapons, equip, supplies, vehicles, armor, etc.                                                     |

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### 6.3.4 9 Line MEDEVAC Request

Line 1. Location of the pickup site

Line 2. Radio Frequency, call sign, and suffix

Line 3. Number of patients by precedence

- A. Urgent
- B. Urgent Surgical
- C. Priority
- D. Routine
- E. Convenience

Line 4. Special equipment required:

- A. None
- B. Hoist
- C. Extraction equipment
- D. Ventilator

Line 5. A. Litter

B. Ambulatory

Line 6. \*Security at pickup site

N - No enemy troops in area

P - Possible enemy troops in area (approach w/ caution)

E - Enemy troops in area (approach w/ caution)

X - Enemy troops in area (armed escort required)

\* In peacetime - number and types of wounds, injuries, and illnesses

Line 7. Method of marking pickup site:

- A. Panels
- B. Pyrotechnic signal
- C. Smoke signal
- D. None

Line 8. Patient nationality and status:

A - US Military

B - US Civilian

C - Non-US Military

D - Non-US Civilian

E - EPW

Line 9. NBC Contamination

N - Nuclear

B - Biological

C - Chemical

\* In peacetime - terrain description of pick-up site

### 6.3.5 ICS FORMS

The FEMA Incident Command System (ICS), which falls under the National Incident Management System (NIMS), uses several preformatted forms. ICS forms are not intended to be used for normal AmRRON communications, between AmRRON operators. ICS forms are intended to be used by AmRRON radio operators who are working with others who do use them. For example, when sending messages to ARES radio operators supporting their local county EOC during an activation.

AmRRON has worked with local, county, and state emergency radio operators in previous real-world disasters. It is very possible that in future disasters or events, interoperability will be necessary between radio operators from different groups/agencies/entities.

After consulting with AmRRON operators who work with state and/or county Emergency Operations Centers, three forms have been identified as the most useful for AmRRON operators to be familiar with, and prepared to use.

These are:

- **ICS Form 213, General Message**
- **ICS Form 213RR, Resource Request Message**
- **ICS Form 214, Activity Log**

ICS 213 is the most commonly used form used in the Incident Command System, and is included in this SOI (see next page).

ICS 213 and ICS 214 are included in your FLMSG list of forms under Forms>ICS.

As of the date of this SOI, ICS 213RR is not in FLMSG, but it (and all ICS forms) can be downloaded in PDF format at:

<https://training.fema.gov/icsresource/icsforms.aspx>

### 6.4.3.1 ICS 213

#### GENERAL MESSAGE (ICS 213)

|                                                                    |                  |         |
|--------------------------------------------------------------------|------------------|---------|
| 1. Incident Name (Optional):                                       |                  |         |
| 2. To (Name and Position):                                         |                  |         |
| 3. From (Name and Position):                                       |                  |         |
| 4. Subject:                                                        | 5. Date:         | 6. Time |
| 7. Message:                                                        |                  |         |
| 8. Approved by: Name: _____ Signature: _____ Position/Title: _____ |                  |         |
| 9. Reply:                                                          |                  |         |
| 10. Replied by: Name: _____ Position/Title: _____ Signature: _____ |                  |         |
| ICS 213                                                            | Date/Time: _____ |         |

## ICS 213 General Message

**Purpose.** The General Message (ICS 213) is used by the incident dispatchers to record incoming messages that cannot be orally transmitted to the intended recipients. The ICS 213 is also used by the Incident Command Post and other incident personnel to transmit messages (e.g., resource order, incident name change, other ICS coordination issues, etc.) to the Incident Communications Center for transmission via radio or telephone to the addressee. This form is used to send any message or notification to incident personnel that requires hard-copy delivery.

**Preparation.** The ICS 213 may be initiated by incident dispatchers and any other personnel on an incident.

**Distribution.** Upon completion, the ICS 213 may be delivered to the addressee and/or delivered to the Incident Communication Center for transmission.

### Notes:

- The ICS 213 is a three-part form, typically using carbon paper. The sender will complete Part 1 of the form and send Parts 2 and 3 to the recipient. The recipient will complete Part 2 and return Part 3 to the sender.
- A copy of the ICS 213 should be sent to and maintained within the Documentation Unit.
- Contact information for the sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

| Block Number | Block Title                                                                                                                               | Instructions                                                                                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1            | <b>Incident Name</b> (Optional)                                                                                                           | Enter the name assigned to the incident. This block is optional.                                                                                                                         |
| 2            | <b>To</b> (Name and Position)                                                                                                             | Enter the name and position the General Message is intended for. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.           |
| 3            | <b>From</b> (Name and Position)                                                                                                           | Enter the name and position of the individual sending the General Message. For all individuals, use at least the first initial and last name. For Unified Command, include agency names. |
| 4            | <b>Subject</b>                                                                                                                            | Enter the subject of the message.                                                                                                                                                        |
| 5            | <b>Date</b>                                                                                                                               | Enter the date (month/day/year) of the message.                                                                                                                                          |
| 6            | <b>Time</b>                                                                                                                               | Enter the time (using the 24-hour clock) of the message.                                                                                                                                 |
| 7            | <b>Message</b>                                                                                                                            | Enter the content of the message. Try to be as concise as possible.                                                                                                                      |
| 8            | <b>Approved by</b> <ul style="list-style-type: none"><li>• Name</li><li>• Signature</li><li>• Position/Title</li></ul>                    | Enter the name, signature, and ICS position/title of the person approving the message.                                                                                                   |
| 9            | <b>Reply</b>                                                                                                                              | The intended recipient will enter a reply to the message and return it to the originator.                                                                                                |
| 10           | <b>Replied by</b> <ul style="list-style-type: none"><li>• Name</li><li>• Position/Title</li><li>• Signature</li><li>• Date/Time</li></ul> | Enter the name, ICS position/title, and signature of the person replying to the message. Enter date (month/day/year) and time prepared (24-hour clock).                                  |

## 6.4 FORMS

**Established forms.** These are forms that can and should be used by all operators when they have information to pass about details during a disaster. Located under the Forms tab at AmRRON.com, and in the AmRRON S.O.I.

|        | <u>Document ID#</u>        | <u>Name</u> _____       |
|--------|----------------------------|-------------------------|
| 6.4.1  | AFP-75                     | Communications Log      |
| 6.4.2  | AFP-76                     | Net Control Station Log |
| AFP-78 | COMINT Intercept Worksheet |                         |

Go to AmRRON.com for the [Monitoring Intercept Form \(AFP-77\)](#)

Access the Forms Directory online at: <http://www.amrron.com/amrron-forms/>

### LEGAL NOTE:

Under FCC Rules, you must hold a General Class license, or higher, to operate in the 20, 40, or 80 meter bands using Voice or Digital Modes.

Also, it is against FCC rules to send encrypted messages over Amateur Radio bands, or to otherwise hide the true meaning of a message.

### 6.4.1 Communications Log

[illegible]

## 6.4.2 Net Control Station (NCS) Log



NCS Call Sign: \_\_\_\_\_

|    |                               |           |      |                   |                           |                       |  |            |
|----|-------------------------------|-----------|------|-------------------|---------------------------|-----------------------|--|------------|
|    | Date(Zulu):                   | Band:     |      | Mode:             |                           | Freq:                 |  |            |
|    | NWOTW (Net Word Of The Week): |           |      |                   |                           |                       |  |            |
|    | NCS Location:                 |           |      | Net Time (Local): |                           | Net Time (Zulu) :     |  |            |
|    |                               |           |      |                   |                           |                       |  |            |
|    | Time                          | Call Sign | Name | State             | City or County (optional) | Check In<br>Dir   Rel |  | Relayed by |
| 1  |                               |           |      |                   |                           |                       |  |            |
| 2  |                               |           |      |                   |                           |                       |  |            |
| 3  |                               |           |      |                   |                           |                       |  |            |
| 4  |                               |           |      |                   |                           |                       |  |            |
| 5  |                               |           |      |                   |                           |                       |  |            |
| 6  |                               |           |      |                   |                           |                       |  |            |
| 7  |                               |           |      |                   |                           |                       |  |            |
| 8  |                               |           |      |                   |                           |                       |  |            |
| 9  |                               |           |      |                   |                           |                       |  |            |
| 10 |                               |           |      |                   |                           |                       |  |            |
| 11 |                               |           |      |                   |                           |                       |  |            |
| 12 |                               |           |      |                   |                           |                       |  |            |
| 13 |                               |           |      |                   |                           |                       |  |            |
| 14 |                               |           |      |                   |                           |                       |  |            |
| 15 |                               |           |      |                   |                           |                       |  |            |
| 16 |                               |           |      |                   |                           |                       |  |            |
| 17 |                               |           |      |                   |                           |                       |  |            |
| 18 |                               |           |      |                   |                           |                       |  |            |
| 19 |                               |           |      |                   |                           |                       |  |            |
| 20 |                               |           |      |                   |                           |                       |  |            |
| 21 |                               |           |      |                   |                           |                       |  |            |
| 22 |                               |           |      |                   |                           |                       |  |            |
| 23 |                               |           |      |                   |                           |                       |  |            |
| 24 |                               |           |      |                   |                           |                       |  |            |
| 25 |                               |           |      |                   |                           |                       |  |            |

## SECTION 7:

### AmRRON TTPs and OPERATIONAL GUIDANCE

#### (Tactics, Techniques, and Procedures)

- **File Naming** (A logical procedure for managing traffic files)
- **Message Precedence** (Prioritizing Traffic)
- **Message Handling Instructions**
- **AmRRON Tier Structure** (Understanding the Duties and Roles)
- **Conduct Before and During Nets**
- **Net Ops - Minimizing Interference**
- **QSY (changing frequency) Procedures**
- **On-Line Net Check Ins**
- **Conducting Nets:**
  - **CH3 Net Scripts**
  - **2M Net Script**
    - ◆ **Amateur Radio to CH3 Communications**

*The radio operator with a guerrilla group came in for his share of difficulties too. First of all, he usually arrived at his destination by parachute. Often his equipment was damaged in the drop. Many times he had to lug it over almost impassable terrain in a wild scramble to protect it and avoid capture. Sometimes he never got on the air at all, and he and his teammates would be the subject of melancholy speculation on the part of his comrades at headquarters until some word trickled back as to what had happened to them. The radio man was expected to do his share of the fighting when the situation demanded it; and injured or sick, he was supposed to keep at his radio as long as he was strong enough to operate it.*

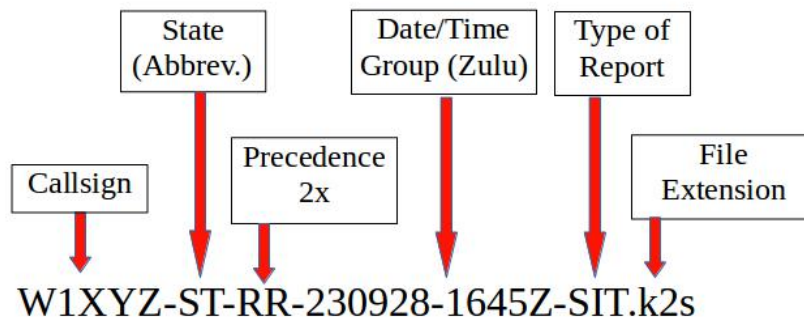
**CIA Library - Agent Radio Operation During World War II**



## 7.1 File Naming Protocol

When digitally saving files, the following file-naming convention will be used for all traffic generated by AmRRON station operators. This aids in quick visual identification of key aspects of the traffic, and provides a standardized, organized format for storing, searching, and retrieving files in folders.

File naming convention will be formatted as follows (using fictitious sample call sign 'W1XYZ'):



CALL-ST-RR-YYMMDD-HHMMZ-TrafficType-##.k2s

Using the above image as a guide, the file naming format may be entered manually.

**OR... (highly recommended)** you can configure FLMSG to auto-generate the first portion of the file format upon saving, after some minor edits.

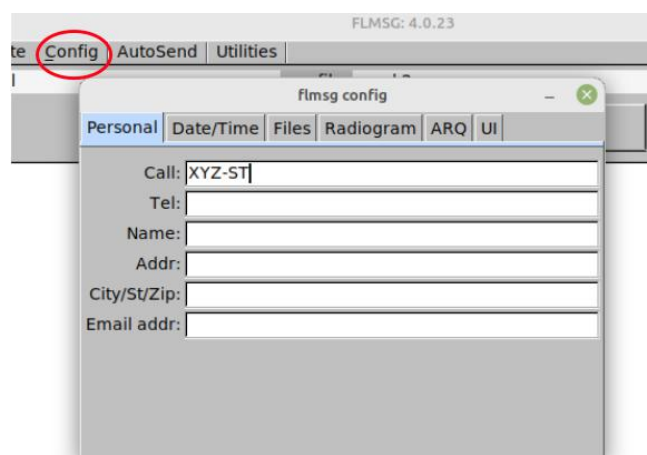
### FLMSG SETUP:

Select **Personal** from the Config dropdown menu

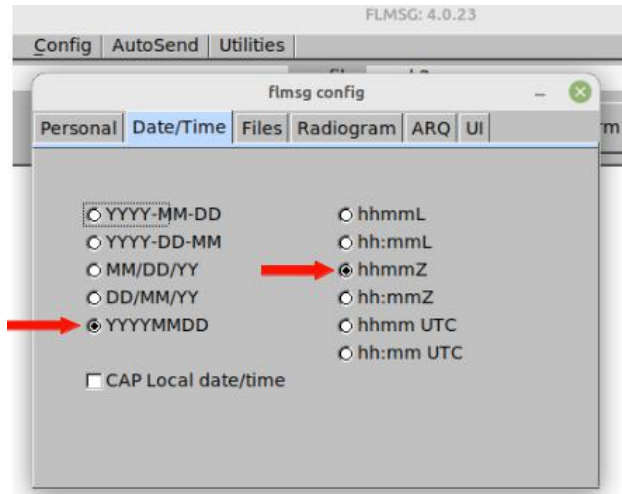
1. Open FLMSG, and select the 'Config' tab
2. In the Call field enter your call sign (optionally, you may put the last three – suffix – of your call sign.

**W1XYZ or XYZ**

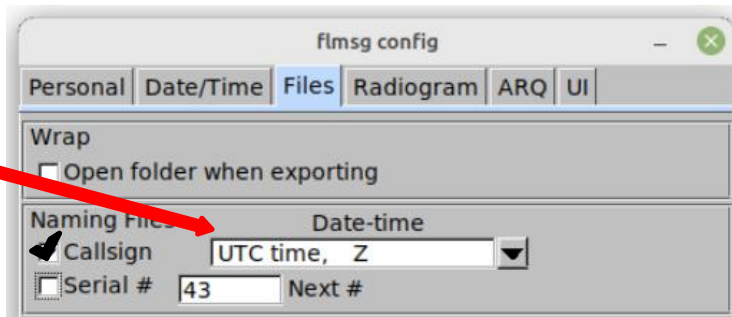
3. Next, add a separating 'dash' ( - ) and then the two-letter abbreviation for your STATE.



4. Select the **Date/Time** tab, and select the format shown in the image to the right.



5. In the **Files** tab, select the 'Callsign' box, and ensure the Date-time is set to 'UTC time, Z'



**Serial #:** It is also recommended to select (CHECK) the Serial # box. Although this adds a sequential number at the end of the file name, making the file name slightly longer, it is extremely useful when directing others toward a specific message. This sequential number is generated by FLMSG each time you generate and save a subsequent FLMSG form (in the example below, '-43')

6. Then Exit out of the Config window.

## NAMING THE FILE BEFORE SAVING A NEW REPORT

### EXAMPLE:

Below is a demonstration of naming a SITREP file using the AmRRON Custom SITREP form in FLMSG.

When you select 'Save as' from the 'File' tab dropdown menu, your file name will appear as:

**Sample: W1XYZ-VA-20230928-164513Z-43.k2s**

**Ready for minor edits!** Make the following changes prior to saving the file.

1. Insert the precedence level after the state (in this example, let's use 'Routine' precedence)
2. Remove **seconds** from the Zulu time (the last two numbers)
3. Remove the '**20**' from the beginning of the year (we all know we're in the 2000's)

A screenshot of a web form. The 'Name:' label is followed by a text input field containing 'W1XYZ-VA-20230928-164513Z.k2s'. Below this, the 'Save in folder:' label is followed by a row of buttons: a left arrow, a folder icon labeled 'jjs', a button labeled '.nbems', a button labeled 'ICS', and a button labeled 'messages'.

Now your file name should appear in the following format:

**W1XYZ-VA-RR-230928-1645Z-SIT-43.k2s**

- or -

**XYZ-VA-RR-230928-1645Z-SIT-43.k2s**

4. Click 'Save'

**Examples** of file naming might read as:

**W1XYZ-VA-RR-230928-1645Z-SIT.k2s (SITUATION REPORT)**

**W1XYZ-VA-RR-230928-1645Z-STAT.k2s (STATUS REPORT)**

**W1XYZ-VA-RR-230928-1645Z-SPOT.k2s (SPOT Report)**

Blank forms can be used for a wide variety of message traffic, such as Welfare traffic, AmRRON Intelligence Briefs, Initial Event Summaries, etc.

**W1XYZ-VA-RR-230928-1645Z-WEL.k2s (Welfare Traffic)**

**W1XYZ-VA-RR-230928-1645Z-IES.k2s (Initial Event Summary)**

Traffic may be generated at one of the SIGCENs (Signals Centers), which can have multiple radio operators handling traffic on behalf of the SIGCEN. A SIGCEN radio operator may insert 'NATL' or 'EAST' in place of the FCC call sign to indicate the National SIGCEN or the Eastern SIGCEN in the file name, as is shown in the EXSUM file name. Examples below:

**NATL-RR-230928-1645Z-EXSUM.k2s (Executive Summary from National SIGCEN)**

**EAST-RR-230928-1645Z-EXSUM.k2s (Executive Summary from Eastern SIGCEN)**

**NATL-RR-230928-1645Z-AIB.k2s (AmRRON Intelligence Brief)**

## 7.2 Message Precedence

The following guidance is adapted from NATO and the CCEB message precedence guidelines. The precedence level determines the handling time, and is determined by the type of message/traffic being handled.

| <b><u>Precedence</u></b> | <b><u>Maximum In-Station Handling Time</u></b> |
|--------------------------|------------------------------------------------|
| <b>ROUTINE (R)</b>       | By beginning of next business day              |
| <b>PRIORITY (P)</b>      | Not to exceed 3 hours                          |
| <b>IMMEDIATE (O)</b>     | Not to exceed 30 minutes                       |
| <b>FLASH (Z)</b>         | Not to exceed 10 minutes                       |

Precedence of traffic remains valid and active until expiration date/time listed in the traffic, or until it is certain that the traffic has reached the intended destination party.

Relevancy and competing precedence traffic:

Traffic relevant to a region or area marked with the same precedence level as traffic from another region or area, (or otherwise not directly relevant), will be handled first, regardless of order received.

**ROUTINE (R):** Handled as soon as traffic flow allows, but no later than the beginning of the next duty day.

Non-Emergency information, Health/Welfare, Administrative, etc.

Used for all types of message traffic justifying transmission by rapid means, but not of sufficient urgency to require higher precedence. ROUTINE precedence messages are delivered in the order received and after all messages of higher precedence. Examples include any message that requires the documentation of its transmission or delivery; messages concerning normal operations, programs, or projects; and periodic or consolidated reports.

**PRIORITY (P):** In-station handling time not to exceed 3 hours

Non-Emergency but very important and/or time sensitive.

Reserved for all traffic requiring expeditious action by the addressee or for conducting operations in progress when ROUTINE precedence will not suffice. PRIORITY precedence messages are processed, transmitted, and delivered in the order received and ahead of all messages of ROUTINE precedence. Examples include requests for supplies or equipment during the conduct of an operation, time-critical items requiring quick response, and [non-ordinary or unique] situation reports. They are to be handled as quickly as possible, with in-station handling time not to exceed 3 hours.

**IMMEDIATE (O):** In station handling time not to exceed 30 minutes

(you say “**emergency traffic**” when talking to non AmRRON hams)

Danger of loss of life or limb is occurring or is Imminent.

Requires immediate delivery. Examples include reports of widespread civil disturbance, reports or warning of grave natural disaster, and requests for or directions concerning search and rescue operations. IMMEDIATE messages are processed, transmitted, and delivered in the order received and ahead of all messages of lower precedence. They are to be handled as quickly as possible, with in-station handling time not to exceed 30 minutes. Messages of lower precedence should be interrupted on all circuits involved until the handling of the IMMEDIATE message is completed. The use of the letter "O" comes from the original name for this level, "operational immediate".

**FLASH (Z):** In station handling time not to exceed 10 minutes

**Extreme** national security or other tactical or strategic threat.

Reserved for initial enemy contact messages or operational combat messages of extreme urgency. Brevity is mandatory. FLASH messages are to be handled as fast as humanly possible, ahead of all other messages, with in-station handling time not to exceed 10 minutes. Messages of lower precedence are interrupted on all circuits involved until the handling of the FLASH message is completed.

Must be handled without any delay.

### 7.3 Message Handling Instructions (HX):

Handling instructions (HX) are less used but quite useful in handling messages. They serve to convey any special instructions to handling and delivering operators. This "prosign," when used, is inserted in the message preamble between the precedence and the station of origin. Its use is optional with the originating stations, but once inserted is mandatory with all relaying stations.

The following definitions apply:

**HXA** --(Followed by number) Collect landline delivery authorized by addressee within X miles. (If no number, authorization is unlimited.)

**HXB** --(Followed by number) Cancel message if not delivered within X hours of filing time; service originating station.

**HXC** --Report date and time of delivery (TOD) to originating station.

**HXD** --Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery.

**HXE** --Delivering station get reply from addressee, originate message back.

**HXF** --(Followed by number.) Hold delivery until...(specific date).

**HXG** --Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.

Example: NR 207 R HXA50 W4MLE 12...(etc.).

If more than one HX prosign is used, they can be combined if no numbers are to be inserted, otherwise the HX should be repeated thus:  
NR 207 R HXAC

## 7.4 AmRRON Tier Structure

**Statement of Purpose:** To outline the general structure, including roles and duties, of AmRRON operations during training and real-world disaster communications events.

During an event, whether real or training, the following is an explanation of AmRRON radio procedures which includes all levels of experience.

### Tier 1 - Non-licensed CH3

The non licensed radio operator is referred to as a **Tier 1** - CH3 operator using MURS, CB, and/or FRS on channel 3.

**Duties:** You are the very localized operator with a vital role in supplying the street level information to be passed up the chain for the leadership.

You should try to cultivate and maintain an active relationship with other tier 1 and 2 operators, as they will relay important info to you as well. Learning how to use a scanner and a shortwave radio with SSB capabilities will further keep you in the know.

### Tier 2 - Licensed Amateur Radio Technician

Local VHF/UHF operator with CH3 capabilities as well. A scanner and shortwave radio are a huge plus here. Communicates with tier 1 and 2 and 3 operators.

**Duties:** Realize the importance of your role as “boots on the ground” collecting and exchanging information on a local level is crucial to our mission.

Cultivate and maintain relationships with tier 1 and 3 operators.



### Tier 3 - HF Operator

Must be able to send information in brief but concise format between themselves, NCS's and back to the Technician. HF/VHF/UHF required. Communicates with tier 2 and 4 operators.

**Duties:** Act as a liaison between the tier 2 and 4 operators

Exchange information between tier 2 operators keeping them in the loop.

Pass important message traffic to a NCS using the band and mode described in the SOI.

Whenever possible use digital modes with the AmRRON Custom forms for message traffic. Also read and understand the white paper explaining "file naming"

If you have NCS experience then step up to the plate when needed. And remember our goal is to pass critical message traffic, please be mindful of others that may need your help with passing traffic. Also please closely follow the directions of a NCS.

**NOTE:** Tiers 4, 5, and 6 are volunteer AmRRON Corps operators who have previously coordinated with AmRRON National to fill the positions of NCS, Backbone, and SIGCEN using the designation N, B and S after their call sign.

### Tier 4 - NCS

HF operator with experience in being a Net Control Station. Must be able to administer order in the midst of chaos. Digital radio experience is a must in FLDIGI, FLMSG, and FLAMP. Communicates with tier 3, 5 and 6 operators. You have big shoes to fill here!

**Duties:** Must take charge and direct the flow of traffic using whatever mode is the fastest and most accurate.

Ensures that traffic is passed to other (liaison stations) tier 4, 5 and 6 operators based upon priority and need.

Also needs to keep the tier 3 operators informed of the next window of operation and process EXSUMS as they are issued. It is not your job to reassemble message traffic into K2s forms. You have enough to do already.

## **Tier 5 - Traffic Support and Coordination Stations**

HF Operators which operate on a persistent basis and maintain a strong signal presence. Proficient in all digital modes in use by AmRRON, Tier 5 stations assist with moving message traffic to other regions, or to destinations within the same region.

**Duties:** Support NCSs by ensuring that wide distribution traffic is available to NCSs for their nets. Accept message traffic from NCSs during nets, or traffic from any station which needs to be relayed to a Tier 6 (SIGCEN) station. Also, if available, may assist with relaying traffic from Tier 3 or 4 station operators if no other station is available when there is not a scheduled net taking place. Assist in relaying directed message traffic intended for a specific destination.

- Authenticates traffic to ensure official traffic being passed is genuine
- Has an acute understanding of the bands and modes best suited for the situation, and a working knowledge of the “Gray Line.”
- Can repackage message traffic into FLMSG/FLAMP files if needed.
- Awareness of message traffic from Tier 3, 4, 5, and 6 operators.

## **Tier 6 - SIGCEN (Signals Center)**

There are two permanent SIGCENS:

- **SIGCEN National (West)**
- **SIGCEN Eastern. (East)**

Additional SIGCENS may be staffed as needed in support of specific operations, or as other unique conditions may require.

The Signals Center consists of multiple operators (three or more) operating together, either at a single location or virtually in close proximity, in support of AmRRON operations. The SIGCEN operators receive message traffic and reports and distribute official AmRRON traffic. Additionally, SIGCENS may provide communications support to a command and control staff in unique disaster or civil defense situations.

**SIGCEN Duties:** Have a system and the equipment to maintain awareness of all critical information.

Able to receive, analyze, and prioritize the information and produce aggregated, summarized reports for distribution.

Higher Echelons: Support served agencies or civic, community, or emergency response leadership, to help them coordinate logistics and planning and make critical decisions, and:

Lower Echelons: Distribution of information to Net Control Station (NCS) operators and the general audience of the network, consisting of compiled Initial Event Summaries, Executive Summaries, SITREPs, and Public Information Announcements, to keep all participants in the network informed.

Maintains a persistent on-air presence, especially during a crisis or emergency.

Work closely with tier 4, 5, and 6 operators, maintaining net schedules and ensuring coverage of scheduled nets.

### **Sample of interaction across tiers**

Tier 1 operators are sharing messages with each other and one of them passes a message to a Tier 2 operator.

The Tier 2 operator makes a contact with a local Tier 3 HF operator, and shares that very same message.

The Tier 3 HF operator then repackages the information into a digital message format and uses the SOI to share that message with others in a larger geographic region, if relevant, or possibly even nationally by coordination with a NCS.

The Tier 4 NCS ensures that the message is sent to its required destination by soliciting help from Tier 5 stations, or any other station able to relay.

The Tier 5 Traffic Support/Coordination station is a persistent presence radio station that is in place to ensure a nationwide network and act as a repository for digital message traffic and reports.

Once the message gets to a Tier 6 SIGCEN it is then prioritized and compared with other messages and reports to determine its relation to ongoing events and trends. Tier 6 SIGCEN will then develop reports (such as an EXSUM) to distribute widely across the network.

## 7.5 Conduct Before and During Nets

### 1. What is expected of **EVERY** radio operator during operational nets:

- a) STEP 1. Fill out an initial STATREP and an Abbreviated STATREP and keep them updated.
- b) Refer to the net schedule and participate in all the nets you are able to
- c) Follow ALL INSTRUCTIONS of NCS during the nets. Scheduled nets are DIRECTED NETS. If NCS asks for assistance or relays be ready to assist.
- d) Unless you have emergency/Immediate traffic, do not check in to a net until NCS asks for check-ins. During voice nets, when NCS asks for check-ins, you check in with your call sign, phonetically, and wait for him to acknowledge you.
- e) If you do not have traffic, then be silent and listen. If you want to conduct a radio check, be sure that others with traffic have finished with their business.
- f) One of the very first things NCSs will do is ask for stations to report their initial STATREPS. You should always have this and any other traffic ready to go PRIOR to a net. If there is a high volume of traffic, NCS may ask for abbreviated STATREPS, and may request them in a different digital mode, such as JS8Call or FSQ4.5.
- g) Have all of your traffic prepared before the net.
- h) Monitor the airwaves and learn the cause, size, scope, and effects of the event, to stay informed and inform others.
- i) Conduct local voice nets where you have established them, and if you can conduct local (VHF/UHF) digital nets, that's a huge bonus.
- j) Don't forget to monitor CH3 (CB, FRS, and MURS if possible) and pass on announcements and news in your area.
- k) During training exercises, ALWAYS announce the traffic as such at the beginning and the end of your traffic, especially if it could cause alarm to others monitoring who may be unaware of the training exercise:

"Exercise, Exercise, Exercise... The following SITREP is part of the [name of exercise] emergency communications exercise..."

"This is only a training exercise, this is [callsign], out."

## 7.6 Minimize Interference:

### Guidance to minimize interference of net traffic being transmitted

*"Every time I'm right in the middle of getting the AIB (or other traffic) from the net, someone transmits in the blind trying to check in, and obliterates half the incoming message, and they do it repeatedly!"*

**Intent of this guidance.** Develop orderly net disciplines so traffic being sent is not disrupted. This guidance is intended to resolve the following conditions:

- A. Net Control often not establishing and/or maintaining working relationship with an Assistant Net Control Station (ANCS), leading to;
- B. Stations who are unable to hear NCS repeatedly transmitting "CQ CQ AmRRON", or repeatedly checking in, interfering with net traffic.
- C. Frustrated station operators who are in the process of receiving traffic, missing traffic due to stations transmitting in the blind, on top of net traffic.
- D. NCSs unable to confirm receipt of traffic from distant station operators.

### Recommended Procedures for net participants during controlled nets:

1. Follow all instructions of NCS and ANCS, precisely.
2. If you do not have Priority or higher traffic for the net,  
do not transmit until:
  - a. You specifically hear/see from NCS or ANCS, clearly calling for check-ins or traffic. If you're not clearly instructed to transmit, you don't transmit, unless:
  - b. You are well into the established net schedule time and have heard nothing, then suddenly see stations checking in, or apparently communicating with NCS/ANCS, THEN:
    - Put out your call sign, followed by "Need Relay" to request to be relayed ONE TIME, and wait to be acknowledged, or;
    - Transmit your call sign, followed by "[Precedence] Traffic" ONE TIME, if you have traffic to pass, and wait to be acknowledged.
3. If you see/hear a station transmitting on top of NCS/ANCS, make a note of his call sign so you can relay him in at the appropriate time. It is apparent he cannot copy NCS or ANCS and will need to be relayed.
4. If you see/hear a station repeat his transmission on top of NCS/ANCS, do not delay, tell the station:

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- a) "<call> de <yourcall>, Net is underway. Stand by." That station has already disrupted the net twice, so your message to him will hopefully stop further interference.
  - b) If station interferes a third time, "<call> de <yourcall>, You are interfering with the net. I will relay you in. Cease transmitting."
  - c) Although you would likely also be disrupting traffic at that moment, all the other operators will appreciate it nonetheless. Then ask NCS or ANCS to re-transmit last traffic.
  - d) When receiving traffic, do not ask for fills or re-transmission until NCS asks for it. Often NCS's station will momentarily BK or 'BT' (Break Transmission), and then resume. That break is not your chance to ask for the rest of the message or request block fills, unless you have Emergency traffic.
5. If after the net you were not able to check in or receive traffic, no one volunteered to relay you in, and it is evident you were not heard, THEN feel free to call 'CQ CQ AmRRON', and request traffic. You will very likely be heard by someone and may still get traffic relayed to you after the net has officially closed.
6. **SET AN ALARM.** Set a recurring alarm to remind you to turn off beacons, sounders, heartbeats, etc so your station doesn't transmit during the AIB transmission or during scheduled nets.
7. **Do NOT manually transmit queries to groups** (such as @amrron) **on JS8Call** during scheduled nets or transmission times (such as the AIB transmission). This includes SNRs (signal report requests), querying for group messages, etc.

## 7.7 QSY Procedures

### QSY GUIDANCE:

It may be necessary for a net to **QSY** (change frequencies or bands) due to numerous factors, such as; interference on the primary frequency; degraded band conditions for that particular band at that particular time; or for other reasons. This is the NCS's prerogative.

#### **Non-Coordinated, for the individual radio operator who cannot find the net:**

**Net moved, but in the same band:** If you do not hear any activity at the scheduled net time/frequency, go up 3kHz, and then again 3kHz. Then 3kHz below the scheduled frequency, and then down another 3kHz until you find the net taking place.

**Net moved to a different band:** If you do not hear the net after doing a +/- 3kHz search, then switch to a different band -- If on 80m, switch to 40m, etc.

**If still unable to locate net:** Return to primary SOI frequency and monitor. The NCS or ANCS may simply be delayed or prevented from operations due to technical difficulties, equipment failures, security issues, or other factors. Band conditions may also be a factor, such as extreme solar activity. You may have a good path to one or two other stations, so stand by and be patient. Those with NCS experience are encouraged to cover the net in place of the scheduled NCS, if conditions permit.

#### **Directed and Coordinated by NCS**

**Within the same band** – NCS announces QSY is necessary, and ANCS acknowledges. ANCS volunteers (or assigned) to find a clear frequency.

Go UP 3 to 6 kHz first. If nothing available or clear, then go DOWN 3 to 5 kHz from the original net frequency.

ANCS returns and reports, announcing the new frequency.

NCS acknowledges and announces QSY to xxx.

ANCS Acknowledges the NCS and relays the announcement. OTHERS announce acknowledgment and then "QSY to xx.xx frequency (for the benefit of others on the net).

QSY Procedures (cont...)

**To a different band** - Same as above, except ANCS goes to the alternate band to check landing freq.

**IF NO ANCS** - NCS asks for a volunteer to scout a clear frequency, or the other band.

**If no volunteer** - NCS announces intent to QSY. Tells all stations to stand by as he scouts other frequencies, or alt band. "WAIT. OUT."

NCS returns and announces, and other stations ACKNOWLEDGE QSY, repeating the message and frequency.

If a QSY is necessary, the ANCS (or volunteer station) will stay behind for approximately five minutes to direct late comers to the QSY freq/band, and then join the net.

## Malicious Interference:

If it is evident that the interference is intentional and malicious, the NCS and ANCS should QSY the net. Depending on the circumstances, the NCS will determine whether to QSY to a different place on the waterfall, or a separate frequency outside of the current waterfall, or to an entirely different band.

The initial announcement should be done using Contestia 4/250, as it is highly robust and one of the most likely modes to be received by other stations, even through most QRM.

If malicious actors jamming/interfering: Use proprietary commands to alert others of QSY (when to use, compared to open announcement).

To alert the net to a QSY, the NCS will transmit **\*"Open Filters"** in Contestia 4/250. The ANCS will immediately relay the same command, "Open Filters."

Upon seeing "OPEN FILTERS" all stations go up 500Hz (or up 500 on the waterfall, from 900 to 1400 on the wf. This allows NCS/ANCS to give commands uninterrupted.

If the interference prevents stations from seeing the "Open Filters" command, they should see the signal up 500Hz and adjust to it. Operators should open their filters if they see deliberate interference taking place precisely where the net is being conducted. They should anticipate a QSY will be taking place.

\*This **Open Filters** command tells stations running narrow filters to open them up so they can see the message to follow at a different place on the waterfall, and on JS8Call. Stations not running filters do not need to take any action, other than to watch the waterfall and JS8Call for further instructions.



## Within the same band:

### NCS/ANCS Command

NCS: "Open Filters"

ANCS: "Open Filters"

**This QSY announcement may be repeated on JS8Call** (per NCS judgment).

- Less likely that malicious station would be monitoring both fldigi and JS8Call
- Highest probability of message being received by the largest number of operators

### NCS/ANCS Commands:

**Minutes** = first number of the new frequency's kHz

**Checkins** = second set of numbers of the new frequency's kHz

**Days** = Minutes (how many minutes until net resumes on new freq)

"Net is closed. **1** minute. **15** checkins." ( = One Fifteen = .115)

"Net is closed. **5** minutes. **92** checkins." ( = Five Ninety-two = .592)

**Sample** command to QSY to 3.592 in 10 minutes:

*"Net is closed in Five minutes. Ninety-two checkins. Next net ten days."*

### Change bands:

*"Net is closed. Forty Checkins" 2Xs*

Operator Action: Change to 40m band, SOI frequency

*"Net is closed. Eighty Checkins" 2Xs*

Operator Action: Change to 80m band, SOI frequency

**Resume operations on new frequency at 900 waterfall unless directed otherwise.**

## 7.8 On-Line Check-in: Practice or Training Nets

1. Check in directly with Net Control
2. If you cannot check in directly, ask another station to relay you.
3. If you cannot check in at all, but you could hear other stations talking during the net, you can still check in via the website.

**Let us know you were there!**

Click on the green 'Net Checkin' button on the website, or...

Check in at: <https://amrron.com/net-check-in-form/>

(only if you could not check in over radio)

## 7.9 Net Scripts

(What to say while starting/running a local CH3 net)

**KEEP IT SIMPLE! ...JUST GET THE MESSAGE OUT!**

### **EXAMPLES**

- Turn to desired channel, and listen for 15 to 30 seconds. Don't hear anything?
- Make sure the frequency is clear and not already in use.
- Key the mic: "***This is AmRRON <your call sign>, is this channel (or frequency) in use?***"

### **7.9.1 Super Simple CH3 Contact:**

***"AmRRON <call sign>, this is AmRRON <your call sign>, are there any AmRRON operators on the air? Any AmRRON Operators wishing to make contact, over"***

### 7.9.2 CH3 Portion of 2m Ham Nets -- what to say

At the 15-minute mark during local nets, NCS should announce a break in the net for all participants to reach out on Channel 3 of their non-licensed radios. What to say? It's easy!

"Attention, Attention \_\_\_\_\_ (*CB, FRS, MURS, etc.*) Channel 3, this is \_\_\_\_\_ (*AmRRON call sign*), conducting an emergency communications practice net. This practice net takes place every \_\_\_\_\_ at \_\_\_\_\_ (*should be :15 after the 2m net start*).

"We're currently conducting a local AmRRON 2m ham radio practice net, and this is the portion of the net we take a few minutes to reach out on the unlicensed bands to give non-hams in our community a chance to practice using their radios, to make contact, and get the net word of the week, which is being passed over regional and local nets taking place across the country.

"The Net Word of the Week this week is \_\_\_\_\_. I say again, \_\_\_\_\_. I spell (spell out the NWOTW phonetically).

"Is there anyone on this channel wishing to practice checking in? Call now. Over."

(Acknowledge each check-in and thank them for practicing.)

Let participants know you'll be returning to the ongoing 2m ham radio net to report the number of CH3 check-ins in your area. Before you sign off, remind them that this net takes place at \_\_:15 every \_\_\_\_\_ and encourage them to mark their calendars and you hope to see them then.

Return to the ongoing local 2m net and be prepared to report your CH3 contacts -- the number of contacts, and which band (CB, FRS, MURS, other?)

As you gain experience, feel free to make adjustments to your script. You can combine portions of other CH3 net scripts to fit your needs and situation.

### 7.9.3 CH3 'Quick Net' Script:

Preamble:

***"This is AmRRON <your call sign>, initiating the local \_\_\_\_\_ (CB/FRS/MURS) AmRRON emergency communications (\*practice) net on Channel 3. Is there anyone wishing to check in to the AmRRON CH3 Net?"***

- Wait 10 – 15 seconds for a response. If you hear a response, offer to check them in to the net. Write down their call sign/code name so you can relay it to a local 2m net control station, or maintain it for your own records if you are not in contact with a 2m net.

If no response is heard:

**Repeat the preamble (optional). Then:**

***"Nothing heard on my end. If you can hear me, but I'm unable to hear you, this is \_\_\_\_\_ (your AmRRON call sign), with the local AmRRON CH3 Net on \_\_\_\_\_ (CB, FRS, MURS) channel three. This is an emergency communications (\*practice) Net. I have the following message to pass.***

***The message is as follows, \_\_\_\_\_*** "(If this is a practice net, relay the NWOTW – Net Word Of The Week). Otherwise, pass the information, and then repeat it.

Close your net. ***"This is AmRRON <your call sign>. I have no further traffic and will now close the net. AmRRON <your call sign>, OUT."***

**\*During non-emergency nets on the CH3 radios, always announce that this as an emergency PRACTICE net.**

#### 7.9.4 Channel 3 Nets (FULL SCRIPT)

This is intended to provide general guidance and a basic script to aid in the use of the Channel 3 project, within the AmRRON communications program.

-----

Good evening (morning/afternoon), this is \_\_\_\_\_ <your call sign> with AmRRON, the American Redoubt Radio Operators Network, and the CH3 project, conducting a (practice) communications net on \_\_\_\_\_ (CB/FRS/MURS) Channel 3.

Is there anyone wishing to check in to the AmRRON CH3 Net?"

<Pause and wait for approximately 10 -15 seconds>

- Take check-ins and give them the NWOTW (Net Word Of The Week) and/or message traffic.
- If you hear no other stations coming back to you, then continue:

"Nothing heard. If anyone can hear me, but I am unable to hear you, the Net Word Of The Week is \_\_\_\_\_ (repeat NWOTW and then spell it phonetically).

Once again, this is \_\_\_\_\_ with the American Redoubt Radio Operators Network conducting a practice net for emergency or disaster preparedness purposes on \_\_\_\_\_ (CB, FRS, MURS) Channel 3.

Any stations wishing to check in, please come now."

<Pause 10 -15 Seconds. Respond and take check-ins if there are any>

A) "This concludes this AmRRON CH3 emergency communications net. This is \_\_\_\_\_, OUT."

-Or-

B) This concludes this AmRRON CH3 emergency communications net. I will be standing by for the next \_\_\_\_\_ minutes in case there are any late-comers. This is \_\_\_\_\_, OUT.

NOTE: This is a guideline for conducting PRACTICE CH3 nets. Modify it for use in your area in a real-world emergency communications situation.

### 7.9.5 VHF/UHF (2m/70cm) Simplex Net Script

Note for Net Control: Refer to NCS Checklist

Five minutes prior to the net announce the following:

This is \_\_\_\_\_ (phonetic call sign). The AmRRON \_\_\_\_\_ (2m, 70cm, ch3) net will begin in 5 minutes. We would appreciate a clear frequency at that time. \_\_\_\_\_ (Phonetic call sign), Standing by.

#### Start ON TIME!

---

QST, QST, QST AmRRON,

This is \_\_\_\_\_ (Call sign), \_\_\_\_\_ (repeated phonetically). My name is \_\_\_\_\_ in \_\_\_\_\_ (location), Net Control for the \_\_\_\_\_ (see note 1) AmRRON net. AmRRON stands for the American Redoubt Radio Operators Network. The purpose of this net is to practice emergency communications and act as relays for the CH3 project. You can learn more about AmRRON and the CH3 project by going to [www.AmRRON.com](http://www.AmRRON.com).

This is a directed net, so please stand by. This is Net Control Operator, \_\_\_\_\_ (call sign).

-Break-

This net meets on \_\_\_\_\_ of each month at \_\_\_\_\_ hrs., (local/Zulu) time, on this frequency of \_\_\_\_\_ MHz. (Make note of SSB, Offsets, or PL tones, if applicable)

In each AmRRON practice net we provide a different net word of the week. This helps us understand the effectiveness and the reach of these nets. In a real-world emergency situation, instead of a net word of the week, it might be some other public announcement or even life-saving information. This helps us practice passing a specific piece of information across the network.

The Net Word Of The Week for this week is \_\_\_\_\_ - \_\_\_\_\_, I say again, the Net Word Of The Week is (phonetically) \_\_\_\_\_ - \_\_\_\_\_.

At this time I will take check-ins. Please report with your call sign, name, general location, and confirm the Net Word Of The Week and the authentication number. This is \_\_\_\_\_, net control, check-ins come now.

After all check-ins, ask if there is any traffic or announcements from any station. Also, if you have any traffic or announcements, do that at this time.

You may also announce that the net is open for any QSOs, but clear calls by 15-min mark.

### **///// At the 15 minute mark /////**

For guidance on reaching out on CH3, refer participating stations to **Section 7.8.2 CH3 Net Contact Guidance**

This is \_\_\_\_\_, Net Control for the AmRRON Net. At this time, all stations act as relays and make contacts on Channel 3 on FRS, MURS, or CB, depending on your capabilities. Remember that some stations may be monitoring and may not be able to respond or you may not be able to copy them, so be sure to announce the Net Word Of The Week and the Authentication Number. After you take CH3 Check-ins, report them to Net Control, with the contact's AmRRON Call Sign, general location, and the band on which the contact was made.

This is \_\_\_\_\_, At this time, are there any late stations wishing to check in? Come now.

-Break-

If anyone can copy this net but you are NOT able to check in, you can click the green 'Net Checkin' button on the website.

The Net Word Of The Week is \_\_\_\_\_-\_\_\_\_\_. This is \_\_\_\_\_, Net Control, standing by.

### **///// 20 Minute mark /////**

This is \_\_\_\_\_, Net Control for the AmRRON Net; Are there any (other) CH3 Check-ins from any relay stations, or any other traffic, before we close the net? Come now.

This is \_\_\_\_\_, Net Control for the AmRRON Net. I would like to thank everyone for participating in the \_\_\_\_\_ AmRRON Net. If you're new and would like to know more, don't forget you can always visit us at [www.AmRRON.com](http://www.AmRRON.com).

We now return this repeater/frequency \_\_\_\_\_ MHz to normal use. 73, everyone, and God bless. This is \_\_\_\_\_, net control, signing off.



## SECTION 8 Radio Operations

### OVERVIEW

This section covers some of the fundamentals of communications that are relevant to AmRRON/TAPRN/CH3 operations. It is designed to bring the beginner or novice communicator up to a basic level of understanding. This will be helpful in determining capabilities and limitations, and to help identify shortcomings and set goals for the communications operator or team.

### 8.1 Making a Radio Call

Experienced operators are very familiar with radio procedures. This section is for the new communicator, especially as it pertains to AmRRON protocol. (Extremely useful on CH3 frequencies)

- Step 1. Check the SOI to make sure you are on the correct frequency at the correct time
- Step 2. Ensure your radio volume is turned up loud enough to hear other stations (operators)
- Step 3. Key the mic at least a half second before speaking, and wait a half second before un-keying.  
Hold the mic approximately 3 - 4 inches away from your mouth, and slightly to the side, and speak PAST the mic, not directly in to it. This is especially important on UHF/VHF radios.
- Step 4. Making the call:
- A) If you know the other station's code name/call sign:  
Always use the other station's ID, and then your own  
**"AmRRON <other station's call sign> this is AmRRON <your call sign>, over"**  
... then wait 10 to 15 seconds ... then say again...  
Repeat this process a couple of times. If nothing is heard, then clear your call:  
**"This is <your call sign>, nothing heard. Out"** (or simply state your call sign/code name)
  - B) If you are not a member of AmRRON, you can simply assign yourself a call sign based on the initials of your name, phonetically: (If your name is **J**ohn **S**mith) "AmRRON, <other station's call sign> this is AmRRON, "**J**uliet **S**ierra, over"

C) If you are trying to make contact with ANY AmRRON Operator who will respond:

Unknown party is referred to as “X-Ray”

***“AmRRON X-Ray, this is AmRRON Juliet Sierra, over.”***

If the responding party is actually an AmRRON member he/she should respond with his AmRRON call sign/code name, replacing “AmRRON X-Ray” (unknown party) with his own.

## **8.2 Communications Crash Course**

Here, we’re specifically talking about radio communications. There are two primary modes of communications – Voice and Digital. Voice is often referred to in radio-speak as ‘Phone.’ Just so you’re not confused if you see that in your research elsewhere. Voice is just that. You key the mic and talk. Your voice goes out over the airwaves and is received by another radio. Simple. The other mode is Digital. For simplification, we’ll include CW (Morse Code) in the Digital category. Digital communications sounds like a modem, making a screeching, warbling sound to the ear. That’s actually data being passed – Much like talking vs. texting on your cell phone.

### **VOICE:**

**PROS:** Instant communications, allowing for quick feedback allowing for brief exchange of information in a short amount of time.

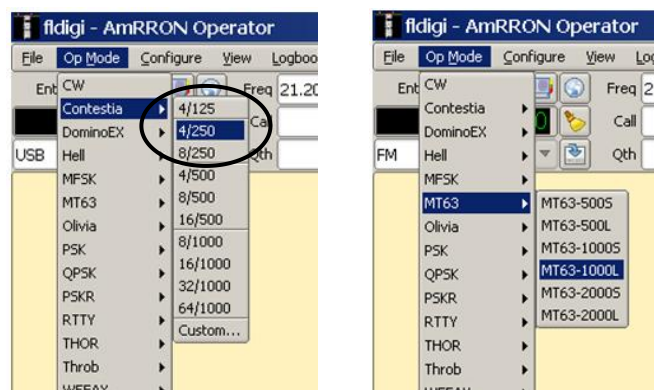
**CONS:** Uses much more bandwidth, requiring more power to transmit and cannot travel as far as a digital message. Not secure. The bad guys instantly know the information you just transmitted.

### **DIGITAL:**

**PROS:** Narrow bandwidth, requiring much less transmitting power to send a message farther than voice. Can often be received when voice cannot due to distance, atmospheric conditions, etc. More secure than voice. Bad guys need equipment, software, and skillsets to decode your traffic.

**CONS:** Slower and more cumbersome than voice. Requires additional equipment (small laptop), software, and skillsets to operate. Requires additional power and logistics to operate. Bad guys with the necessary equipment and skills can receive your transmissions from farther distances.

**More on Digital:** There are several Digital modes referenced in this SOI. They can be selected from the dropdown menu in your fldigi software as the screenshots (right) show.

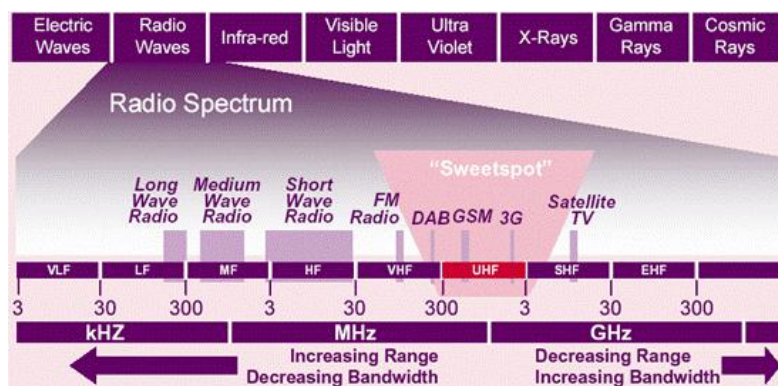


#### Important Notes:

- Make sure to set the proper audio settings [**configure**] then
- [**sound card**] then [**port audio**] to match your computer Audio
- USB Soundcard, such as Signalink, provides best performance, but an audio patch cable from radio's headphone 'out' jack to computer works well for simply receiving.

You do NOT need to be licensed to receive digital communications!

#### There are three Radio Waves we will be using for AmRRON:



#### HF (High Frequency)

**3 - 30 MHz**

#### VHF (Very High Frequency)

**30 - 300 MHz**

#### UHF (Ultra High Frequency)

**300 - 3000 MHz (3 GHz)**

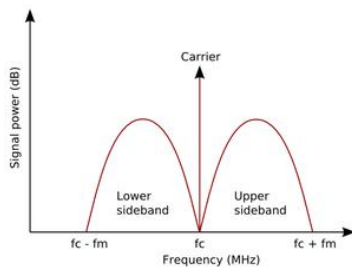
| <u>MF</u>                                                                            | <u>HF</u>                                                                                                                                     | <u>VHF</u>                                                                                                                                                  | <u>UHF</u>                                                                                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <p>AM commercial broadcasting uses 535kHz to 1,605kHz</p> <p>1,600 kHz = 1.6 MHz</p> | <p>CB Radio (27 MHz)</p> <p>20m Ham (14 MHz)</p> <p>40m Ham (7.0 MHz)</p> <p>80m Ham (3.5 MHz)</p> <p>All other Ham HF Shortwave Brdcstng</p> | <p>2m Ham (146 MHz)</p> <p>MURS (152 MHz)</p> <p>Police-Fire-EMS-Public Services (varies)</p> <p>Marine (157 MHz)</p> <p>FM Broadcasting - (88-108 MHz)</p> | <p>70cm Ham (440 MHz)</p> <p>FRS (462 &amp; 467 MHz)</p> <p>Police-Fire-EMS-Public Services (varies)</p> <p>Business</p> |

## Single Side Band (SSB)

There are two sides to the bandwidth of a signal:

USB (Upper Side Band)

LSB (Lower Side Band)



Using both sides of the band at once is called AM (Amplitude Modulation)

SSB is used for transmitting both Voice and Digital, mostly used in HF bands.

SSB allows your signal to ride along one side of the band, requiring less power to push your signal farther. It

narrows (squeezes) the information traveling through the airwaves to one side of the band, and this is why you can talk to someone in New Zealand from central Montana on a 20m frequency. SSB is especially useful with weak signals or poor band conditions, but can be used any time and is what Ham operators almost always transmit on when using the HF bands.

As a minimum you must have a shortwave radio with Single Side Band capabilities to be able to receive these transmitted signals.

## 8.3 Communications Gear (an Overview)

**There are three basic types of radios:**

1. **Transceivers:** Two-way communications – Transmit and Receive
  - Ham Radios (aka. Ham 'Rigs'), FRS, MURS, CB, cell phones, etc.
2. **Transmitters:** One way – OUT. Transmit only
  - Dakota Alert, FM broadcast transmitters, motion sensors, personal emergency beacon
3. **Receivers:** One way – IN. Receive only.
  - Scanners, AM/FM radios, Shortwave radios, pagers, weather station receivers, etc.

**Additional Equipment:** (don't forget the antenna cable adapter for your handheld radio!)

A) **Antenna.** IT'S ALL ABOUT THE ANTENNA! Invest in this area by purchasing or building, and:

- Mount outdoors and as high as possible for best performance
- Shortwave antennas should be as long as possible (up to 250') strung outside in horizontal loop, whenever possible/practical.
- Use Ferrite Chokes at antenna cable connection points when possible, especially when using digital communications. This helps eliminate RF (radio frequency) interference from electronics.
- Ground the antenna when possible/practical or applicable

B) **Antenna Tuner:** Enables the use of one long antenna for operating on multiple bands. Used primarily for HF Transceivers.

C) **Soundcard/Soundcard Interface:** Such as Signalink brand soundcard. This is necessary for your radio to work together with your computer when sending/receiving digital communications.

D) **Power Supply:** Enables you to power 12v-13.8v DC equipment (such as Ham radios) with 110v AC power source, such as a wall outlet (grid-up) or generator.

E) **Inverter:** Supplies 110v AC from 12v DC Deep Cycle RV (or auto) battery/battery bank.

F) **Computer:** Such as small laptop, netbook, or Raspberry Pi. Necessary for operating digital communications software, such as fldigi.

***"the secret of war lies in the communications"***  
*- Napoleon Bonaparte*

## SECTION 9 Radio Communications References and Resources

- Phonetic Alphabet (NATO/ITU)
- Signal Reports (RST system)
- General Overview of Various Radio Capabilities
- Zulu Time Conversion Chart
- Prowords
- Other Nets of Interest

### Dipole Wire Antenna Formula

The most widely used formula to calculate the approximate overall length of wire required for a dipole is:

$$468 / \text{frequency (MHz)} = \text{length of wire in feet.}$$

### 9.1 NATO/ITU Phonetic Alphabet

|                  |                   |                  |
|------------------|-------------------|------------------|
| <b>A</b> ALFA    | <b>J</b> JULIET   | <b>S</b> SIERRA  |
| <b>B</b> BRAVO   | <b>K</b> KILO     | <b>T</b> TANGO   |
| <b>C</b> CHARLIE | <b>L</b> LIMA     | <b>U</b> UNIFORM |
| <b>D</b> DELTA   | <b>M</b> MIKE     | <b>V</b> VICTOR  |
| <b>E</b> ECHO    | <b>N</b> NOVEMBER | <b>W</b> WHISKEY |
| <b>F</b> FOXTROT | <b>O</b> OSCAR    | <b>X</b> X-RAY   |
| <b>G</b> GOLF    | <b>P</b> PAPA     | <b>Y</b> YANKEE  |
| <b>H</b> HOTEL   | <b>Q</b> QUEBEC   | <b>Z</b> ZULU    |
| <b>I</b> INDIA   | <b>R</b> ROMEO    |                  |

## 9.2 Signal Report (R-S-T System)

*"Can I get an RST report please?" or "...a signal report please?"*

### READABILITY

- 1—Unreadable
- 2—Barely readable, occasional words distinguishable.
- 3—Readable with considerable difficulty.
- 4—Readable with practically no difficulty.
- 5—Perfectly readable.

### SIGNAL STRENGTH

- 1—Faint signals, barely perceptible.
- 2—Very weak signals.
- 3—Weak signals.
- 4—Fair signals.
- 5—Fairly good signals.
- 6—Good signals.
- 7—Moderately strong signals.
- 8—Strong signals.
- 9—Extremely strong signals.

### tone (normally used only during CW)

- 1—Sixty Hz ac or less, very rough and broad.
- 2—Very rough ac, very harsh and broad.
- 3—Rough ac tone, rectified but not filtered.
- 4—Rough note, some trace of filtering.
- 5—Filtered rectified ac but strongly ripple-Modulated.
- 6—Filtered tone, definite trace of ripple modulation.
- 7—Near pure tone, trace of ripple modulation.
- 8—Near perfect tone, slight trace of modulation.
- 9—Perfect tone, no trace of ripple or modulation of any kind.

### Examples:

#### Perfect signal, perfect copy:

*"Roger, I copy you five by nine."*

#### Fair signal, fair copy:

*"Roger, I copy you three by four"*

### 9.3 General Overview of Radio Compatibility

| Radio and Band Performance Compatibility                                                                                                    |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----|------|----|-----------------------------|--------------------------|-------------------------------------|--------|----------|---------------|----------------------------|--------|-----------------------------|-----------------------------|
| Can Communicate With<br>                                   | FRS | MURS | CB | Shortwave Rcvr.<br>(No SSB) | Shortwave Rcvr.<br>w/SSB | Scanner (800MHz)<br>Police/Fire/EMS | 2m Ham | 70cm Ham | Dual-Band Ham | Baofeng -type<br>Dual-Band | HF Ham | FM Broadcast<br>Transmitter | AM Broadcast<br>Transmitter |
| My Device<br>                                              |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |
| FRS                                                                                                                                         | X   |      |    |                             |                          | T                                   |        |          | T             | X                          |        | R                           |                             |
| MURS                                                                                                                                        |     | X    |    |                             |                          | T                                   |        |          | T             | X                          |        |                             |                             |
| CB                                                                                                                                          |     |      | X  | T                           | *T                       |                                     |        |          |               |                            |        |                             |                             |
| Shortwave Receiver<br>(No SSB)                                                                                                              |     |      | R  |                             |                          |                                     |        |          |               |                            |        |                             | R                           |
| Shortwave Receiver<br>w/ SSB                                                                                                                |     |      | *R |                             |                          |                                     |        |          |               |                            | R      |                             | R                           |
| Scanner (800MHz)<br>Police/Fire/EMS                                                                                                         | R   | R    |    |                             |                          |                                     | R      | R        | R             | R                          |        | R                           |                             |
| 2m Ham                                                                                                                                      |     |      |    |                             |                          | T                                   | X      |          | X             | X                          |        |                             |                             |
| 70cm Ham                                                                                                                                    |     |      |    |                             |                          | T                                   |        | X        | X             | X                          |        |                             |                             |
| Dual Band Ham                                                                                                                               |     |      |    |                             |                          | T                                   | X      | X        | X             | X                          |        |                             |                             |
| Baofeng-type Dual-Band                                                                                                                      | X   | X    |    |                             |                          | T                                   | X      | X        | X             | X                          |        | R                           |                             |
| HF Ham on SSB                                                                                                                               |     |      | R  |                             | T                        |                                     |        |          |               |                            | X      |                             | R                           |
| FM Broadcast Transmitter                                                                                                                    |     |      |    |                             |                          | T                                   |        |          |               | T                          |        |                             |                             |
| AM Broadcast Transmitter                                                                                                                    |     |      |    | T                           |                          |                                     |        |          |               |                            | T      |                             |                             |
| <b>T</b> – Transmit (OUT) Only <b>R</b> – Receive (IN) Only <b>X</b> – Transmit <u>and</u> Receive                                          |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |
| *SSB Shortwave Radio required for listening to CB Radios transmitting on SSB                                                                |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |
| NOTE: Range of frequencies a scanner can receive varies by model. Check your manufacturer’s specs.                                          |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |
| This chart is a general guideline and is not conclusive. There are many variables and modifications that can affect a radio’s capabilities. |     |      |    |                             |                          |                                     |        |          |               |                            |        |                             |                             |

*"You see, wire telegraph is a kind of a very, very long cat. You pull his tail in New York and his head is meowing in Los Angeles. Do you understand this? And radio operates exactly the same way: you send your signals here, they receive them there. The only difference is that there is no cat."*

- Albert Einstein



## Section 9.4

### ZULU Time Conversion Chart

Most of the **United States** begins Daylight Saving Time at 2:00 a.m. on the second Sunday in March and reverts to standard time on the first Sunday in November. In the U.S., each time zone switches at a different time.

To make the conversion to your local time, see the chart below. Find your local time in the first column. If you are on Eastern Daylight Saving Time (EDT), you would use the second column to find your Zulu Time/UTC. For instance, if it's 11 a.m. Eastern Daylight Saving Time in Washington, D.C., it's 1500 hours in Zulu time/UTC.

|                                                                                                                                                                                                                                                                                                                                          |                 | LOCAL | EDT     | EST     | CDT     | CST     | MDT     | MST     | PDT     | PST     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                                                                                                                                                                                                                                                                                                                          |                 |       | Mar-Nov | Nov-Mar | Mar-Nov | Nov-Mar | Mar-Nov | Nov-Mar | Mar-Nov | Nov-Mar |
| <b>Time Zone Legend:</b><br><br><b>EDT:</b><br>Eastern Daylight Saving Time<br><br><b>EST:</b><br>Eastern Standard Time<br><br><b>CDT:</b><br>Central Daylight Saving Time<br><br><b>CST:</b><br>Central Standard Time<br><br><b>MDT:</b><br>Mountain Daylight Saving Time<br><br><b>MST:</b><br>Mountain Standard Time<br><br>--- -- -- | <b>Midnight</b> |       | 0400    | 0500    | 0500    | 0600    | 0600    | 0700    | 0700    | 0800    |
|                                                                                                                                                                                                                                                                                                                                          | <b>1 a.m.</b>   |       | 0500    | 0600    | 0600    | 0700    | 0700    | 0800    | 0800    | 0900    |
|                                                                                                                                                                                                                                                                                                                                          | <b>2 a.m.</b>   |       | 0600    | 0700    | 0700    | 0800    | 0800    | 0900    | 0900    | 1000    |
|                                                                                                                                                                                                                                                                                                                                          | <b>3 a.m.</b>   |       | 0700    | 0800    | 0800    | 0900    | 0900    | 1000    | 1000    | 1100    |
|                                                                                                                                                                                                                                                                                                                                          | <b>4 a.m.</b>   |       | 0800    | 0900    | 0900    | 1000    | 1000    | 1100    | 1100    | 1200    |
|                                                                                                                                                                                                                                                                                                                                          | <b>5 a.m.</b>   |       | 0900    | 1000    | 1000    | 1100    | 1100    | 1200    | 1200    | 1300    |
|                                                                                                                                                                                                                                                                                                                                          | <b>6 a.m.</b>   |       | 1000    | 1100    | 1100    | 1200    | 1200    | 1300    | 1300    | 1400    |
|                                                                                                                                                                                                                                                                                                                                          | <b>7 a.m.</b>   |       | 1100    | 1200    | 1200    | 1300    | 1300    | 1400    | 1400    | 1500    |
|                                                                                                                                                                                                                                                                                                                                          | <b>8 a.m.</b>   |       | 1200    | 1300    | 1300    | 1400    | 1400    | 1500    | 1500    | 1600    |
|                                                                                                                                                                                                                                                                                                                                          | <b>9 a.m.</b>   |       | 1300    | 1400    | 1400    | 1500    | 1500    | 1600    | 1600    | 1700    |
|                                                                                                                                                                                                                                                                                                                                          | <b>10 a.m.</b>  |       | 1400    | 1500    | 1500    | 1600    | 1600    | 1700    | 1700    | 1800    |
|                                                                                                                                                                                                                                                                                                                                          | <b>11 a.m.</b>  |       | 1500    | 1600    | 1600    | 1700    | 1700    | 1800    | 1800    | 1900    |
|                                                                                                                                                                                                                                                                                                                                          | <b>NOON</b>     |       | 1600    | 1700    | 1700    | 1800    | 1800    | 1900    | 1900    | 2000    |
|                                                                                                                                                                                                                                                                                                                                          | <b>1 p.m.</b>   |       | 1700    | 1800    | 1800    | 1900    | 1900    | 2000    | 2000    | 2100    |
|                                                                                                                                                                                                                                                                                                                                          | <b>2 p.m.</b>   |       | 1800    | 1900    | 1900    | 2000    | 2000    | 2100    | 2100    | 2200    |
|                                                                                                                                                                                                                                                                                                                                          | <b>3 p.m.</b>   |       | 1900    | 2000    | 2000    | 2100    | 2100    | 2200    | 2200    | 2300    |
|                                                                                                                                                                                                                                                                                                                                          | <b>4 p.m.</b>   |       | 2000    | 2100    | 2100    | 2200    | 2200    | 2300    | 2300    | 2400    |
|                                                                                                                                                                                                                                                                                                                                          | <b>5 p.m.</b>   |       | 2100    | 2200    | 2200    | 2300    | 2300    | 2400    | 2400    | 0100    |
|                                                                                                                                                                                                                                                                                                                                          | <b>6 p.m.</b>   |       | 2200    | 2300    | 2300    | 2400    | 2400    | 0100    | 0100    | 0200    |
|                                                                                                                                                                                                                                                                                                                                          | <b>7 p.m.</b>   |       | 2300    | 2400    | 2400    | 0100    | 0100    | 0200    | 0200    | 0300    |
|                                                                                                                                                                                                                                                                                                                                          | <b>8 p.m.</b>   |       | 2400    | 0100    | 0100    | 0200    | 0200    | 0300    | 0300    | 0400    |
|                                                                                                                                                                                                                                                                                                                                          | <b>9 p.m.</b>   |       | 0100    | 0200    | 0200    | 0300    | 0300    | 0400    | 0400    | 0500    |
|                                                                                                                                                                                                                                                                                                                                          | <b>10 p.m.</b>  |       | 0200    | 0300    | 0300    | 0400    | 0400    | 0500    | 0500    | 0600    |
|                                                                                                                                                                                                                                                                                                                                          | <b>11 p.m.</b>  |       | 0300    | 0400    | 0400    | 0500    | 0500    | 0600    | 0600    | 0700    |
|                                                                                                                                                                                                                                                                                                                                          |                 | LOCAL | EDT     | EST     | CDT     | CST     | MDT     | MST     | PDT     | PST     |

## 9.5 PROWORDS

### Word or Phrase Meaning

|                 |                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL AFTER       | I refer to the portion of the message that follows...                                                                                                                                                                                                                                                                                                                |
| ALL BEFORE      | I refer to the portion of the message that precedes....                                                                                                                                                                                                                                                                                                              |
| BREAK           | <p>I hereby indicate the separation of the text from other portions of the message. Or:</p> <p>I have completed the text of the message, signature follows, etc. (When break-in is permitted, receiving operator may interrupt the transmitting operator to request re transmission of a portion of a message. This           proword is the interruption sign.)</p> |
| CORRECTION      | An error has been made in this transmission (or message indicated). Transmission will continue with the last word correctly transmitted.                                                                                                                                                                                                                             |
| FIGURE(S)       | Numerals or numbers follow.                                                                                                                                                                                                                                                                                                                                          |
| FROM            | The originator of this message is indicated by the address designation immediately following.                                                                                                                                                                                                                                                                        |
| I READ BACK     | The following is my response to your instructions to read back.                                                                                                                                                                                                                                                                                                      |
| I SAY AGAIN     | I am repeating transmission (or portion) indicated.                                                                                                                                                                                                                                                                                                                  |
| I SPELL         | I shall spell the next word phonetically.                                                                                                                                                                                                                                                                                                                            |
| MESSAGE FOLLOWS | A message which requires recording is about to follow. (Transmitted immediately after the call.) Word or Phrase Meaning Radio Operator's Handbook _____                                                                                                                                                                                                              |
| OUT             | This is the end of my transmission to you.<br>No response is necessary or expected.                                                                                                                                                                                                                                                                                  |
| OVER            | This is the end of my transmission to you.<br><br>A response is necessary and expected. Go ahead and transmit.                                                                                                                                                                                                                                                       |
| READ BACK       | Repeat this entire transmission back to me exactly as received.                                                                                                                                                                                                                                                                                                      |
| RELAY TO        | Transmit this message to all addressees or to the address designations immediately following.                                                                                                                                                                                                                                                                        |
| ROGER           | I have received your last transmission satisfactorily.                                                                                                                                                                                                                                                                                                               |

|            |                                                                                                                                                                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ROUTINE    | Precedence ROUTINE.                                                                                                                                                                                                                               |
| SAY AGAIN  | Repeat all of your last transmission. Followed by identification data means: Say again (portion indicated).” (“Repeat” is not used because it is the signal for naval gunfire and artillery to fire.)                                             |
| THIS IS    | This transmission is from the station whose designation immediately follows.                                                                                                                                                                      |
| TIME       | That which immediately follows is the time or date-time group of the message.                                                                                                                                                                     |
| TO         | The addressees whose designations immediately follow are to take action on this message.                                                                                                                                                          |
| WAIT       | I must pause for a few seconds.                                                                                                                                                                                                                   |
| WAIT OUT   | I must pause longer than a few seconds.                                                                                                                                                                                                           |
| WILCO      | I have received your message, understand it, and will comply. (To be used only by the addressee. Since the meaning of ROGER is included in that of WILCO, the two prowords are never used together.)                                              |
| WORD AFTER | I refer to the word that follows. WORD BEFORE I refer to the word that precedes. WORDS TWICE Communication is difficult. Transmit(ting) each phrase (or each code group) twice. This proword may be used as an order, request, or as information. |
| WRONG      | Your last transmission was incorrect. The correct version is.                                                                                                                                                                                     |

#### *Interesting Radio History*

*Four types of agent radio operators can be distinguished -- those who operated in metropolitan areas in concert with well-organized watcher organizations; those who operated on their own in cities; those who were with the guerrilla groups; and those who worked alone in isolated rural areas.*

*CIA Library - Agent Radio Operation During World War II*

## 9.6 Other Frequencies & Nets of interest

Some of these resources are not necessarily patriot oriented, are great resources for training, information, and situational awareness.

**Hurricane Watch Net** 14.325 Voice (when activated) <https://hwn.org/>

**Maritime Mobile Net** 14.300MHz - (Voice) Also is the IARU Region 2 Emergency Communications Frequency for ships and weather forecasts  
(Monitored 24/7/365)

**Montana Traffic Net.** <http://montanatrafficnet.com/>

**NoonTime Net** <http://www.noontimenet.org/>  
7268.5 kHz. and 3970 kHz (Voice)

**ORCA NET** (Oregon and California Digital Net)  
<http://orcadigitalnet.com/reports/>

NBEMS Training & Practice using FLDIGI/FLMSG/FLAMP

**3.581 USB** (1500 on Waterfall) using MFSK-32 mode

Tuesdays:

0300Z (1900 Pacific) Early Check-ins

0330Z (1930 Pacific) Net Begins

**SATERN** (Salvation Army Team Emergency Radio Network)

<https://qso.com/satern/>

14.265 National Voice

7.265 Regional Voice

### **FEMA Region X Monthly Interoperability NET**

**60m Channels** (ARES/RACES)

Channel 1: 5330.5 kHz

Channel 2: 5346.5 kHz

Channel 3: 5357.0 kHz

Channel 4: 5371.5 kHz

Channel 5: 5403.5 kHz

#### **3rd Wednesday 1730-1900 Zulu**

1730Z CH1 Open net, delay check-ins

1735Z CH2 BPSK31 NCS sends 1st digital message

1740Z CH2 MT63-2KL NCS repeats 1st message

1745Z CH1 NCS calls for check-ins

1815Z CH2 BPSK31 NCS sends 2nd msg

1825Z CH2 MT63-2KL NCS repeats 2nd Message

1827Z CH1 NCS calls for reports

1850Z CH1 NCS closes the net

## Voice of America (VOA) RADIOGRAM

VOA Radiogram is now Shortwave Radiogram. Please visit [swradiogram.net](http://swradiogram.net)

Shortwave Radiogram continues VOA Radiogram's tradition testing new modes and is an interesting source for Digital Ops wishing to practice more with FLDIGI & FLAMP.

Shortwave Radiogram Transmission Schedule (AM) -- all times are UTC/Zulu

**Sunday** 1430-1500 UTC

9955 kHz via WRMI

Florida

**Monday** 0800-0830 UTC

5850 kHz via WRMI

Florida

**Wednesday** 1330-1400 UTC

15770 kHz via WRMI

Florida

**Friday** 0530-0600 UTC

7780 kHz via WRMI

Florida

**Saturday** 0230-0300 UTC

9265 kHz via WINB

Pennsylvania

**Saturday** 2300-2330 UTC

7570 kHz via WRMI

Florida

## Wilderness Protocol (from ARRL)

The Wilderness protocol (see page 101, August 1995 QST) calls for hams in the wilderness to announce their presence on, and to monitor, the national calling frequencies for five minutes beginning at the top of the hour, every three hours from 7 AM to 7 PM while in the back country. A ham in a remote location may be able to relay emergency information through another wilderness ham who has better access to a repeater.

National calling frequencies:

52.525 MHz

146.52 "

223.50 "

446.00 "

1294.50 MHz.

## 9.7 Frequency Tables

### 9.7.1 FRS (Family Radio Service)

Some brands may deviate from this standard. Check the frequencies listed by the manufacturer of your brand.

| Channel  | Frequency (MHz) | Maximum power | Notes            |
|----------|-----------------|---------------|------------------|
| 1        | 462.5625        | 2 watts       | Shared with GMRS |
| 2        | 462.5875        | " "           | " "              |
| <b>3</b> | <b>462.6125</b> | <b>" "</b>    | <b>" "</b>       |
| 4        | 462.6375        | " "           | " "              |
| 5        | 462.6625        | " "           | " "              |
| 6        | 462.6875        | " "           | " "              |
| 7        | 462.7125        | 2 watts       | " "              |
| 8        | 467.5625        | 0.5 watts     | " "              |
| 9        | 467.5875        | " "           | " "              |
| 10       | 467.6125        | " "           | " "              |
| 11       | 467.6375        | " "           | " "              |
| 12       | 467.6625        | " "           | " "              |
| 13       | 467.6875        | " "           | " "              |
| 14       | 467.7125        | 0.5 watts     | Shared with GMRS |

Some clubs such as *REACT International, Inc.* and the *National SOS Radio Network* have recommended FRS Channel 1 as a national emergency/calling channel. Monitor CH1 for information.

More FRS information can be found at:

[https://wiki.radioreference.com/index.php/FRS/GMRS\\_combined\\_channel\\_chart](https://wiki.radioreference.com/index.php/FRS/GMRS_combined_channel_chart)

### 9.7.2 GMRS (General Mobile Radio Service) License Required

This band is not used for AmRRON, but due to the popularity among some prepper groups, it is added for reference.

For use with simplex operation. Frequencies shared with FRS

For use with GMRS repeaters (+ offset) 5 MHz

| Name              | Frequency       | Motorola Ch. Config. |
|-------------------|-----------------|----------------------|
| "5625" or "FRS 1" | 462.5625 MHz    | Ch. 1                |
| "5875" or "FRS 2" | 462.5875        | Ch. 2                |
| "6125" or "FRS 3" | <b>462.6125</b> | <b>Ch. 3</b>         |
| "6375" or "FRS 4" | 462.6375        | Ch. 4                |
| "6625" or "FRS 5" | 462.6625        | Ch. 5                |
| "6875" or "FRS 6" | 462.6875        | Ch. 6                |
| "7125" or "FRS 7" | 462.7125        | Ch. 7                |

| Name  | Lower frequency (repeater output) | Upper frequency (repeater input) | Motorola Ch. Config |
|-------|-----------------------------------|----------------------------------|---------------------|
| "550" | 462.550 MHz                       | 467.550 MHz                      | Ch. 15              |
| "575" | 462.575                           | 467.575                          | Ch. 16              |
| "600" | 462.600                           | 467.600                          | Ch. 17              |
| "625" | 462.625                           | 467.625                          | Ch. 18              |
| "650" | 462.650                           | 467.650                          | Ch. 19              |
| "675" | 462.675                           | 467.675                          | Ch. 20              |
| "700" | 462.700                           | 467.700                          | Ch. 21              |
| "725" | 462.725                           | 467.725                          | Ch. 22              |

### 9.7.3 MURS (Multi-Use Radio Service)

| Channel  | Frequency          | Channel Name |
|----------|--------------------|--------------|
| 1        | 151.820 MHz        | --           |
| 2        | 151.880 MHz        | --           |
| <b>3</b> | <b>151.940 MHz</b> | --           |
| 4        | 154.570 MHz        | Blue Dot     |
| 5        | 154.600 MHz        | Green Dot    |

### 9.7.4 CB (Citizens Band)

| Channel  | Freq          | Channel | Freq   | Channel | Freq   | Channel    | Freq          |
|----------|---------------|---------|--------|---------|--------|------------|---------------|
| 1        | 26.965        | 11      | 27.085 | 21      | 27.215 | 31         | 27.315        |
| 2        | 26.975        | 12      | 27.105 | 22      | 27.225 | 32         | 27.325        |
| <b>3</b> | <b>26.985</b> | 13      | 27.115 | 23      | 27.255 | 33         | 27.335        |
| 4        | 27.005        | 14      | 27.125 | 24      | 27.235 | 34         | 27.345        |
| 5        | 27.015        | 15      | 27.135 | 25      | 27.245 | 35         | 27.355        |
| 6        | 27.025        | 16      | 27.155 | 26      | 27.265 | <b>*36</b> | <b>27.365</b> |
| 7        | 27.035        | 17      | 27.165 | 27      | 27.275 | 37         | 27.375        |
| 8        | 27.055        | 18      | 27.175 | 28      | 27.285 | 38         | 27.385        |
| 9        | 27.065        | 19      | 27.185 | 29      | 27.295 | 39         | 27.395        |
| 10       | 27.075        | 20      | 27.205 | 30      | 27.305 | 40         | 27.405        |

**\*CH 36 (LSB)** is the AmRRON SSB hailing frequency

### 9.7.5 NOAA Weather Alert (National Oceanic and Atmospheric Administration)

At least one of these frequencies is active in nearly every part of the country.

|         |         |         |         |
|---------|---------|---------|---------|
| 162.400 | 162.425 | 162.450 | 162.475 |
| 162.500 | 162.525 | 162.550 |         |



### 9.7.6 National Calling/Hailing Frequencies

FRS Ch. 1 (CERT and other national disaster response programs)

MURS N/A

CB Ch. 19 'Trucker's Channel'

Ch. 9 (for emergency) - Rarely ever monitored anymore

2m 146.520 MHz (National Simplex Freq)

Marine VHF - Ch. 16

### 9.7.7 UTC Time Server Frequencies

The following frequencies are excellent for receiving UTC Time (Zulu Time).

In a grid-down communications situation, time accuracy for nets, transmitting, and/or receiving important information will be critical.

#### **Frequency Station Location**

|         |                                 |
|---------|---------------------------------|
| 2.5000  | Fort Collins, Colorado, USA     |
| 3.3300  | Ottawa, Canada                  |
| 2.5000  | Kekaha, Hawaii, USA             |
| 5.0000  | Fort Collins, Colorado, USA     |
| 5.0000  | Kekaha, Hawaii, USA             |
| 7.850   | Ottawa, Canada                  |
| 10.0000 | WWV Fort Collins, Colorado, USA |
| 10.0000 | Kekaha, Hawaii, USA Continuous  |
| 14.6700 | Ottawa, Canada                  |
| 15.0000 | Fort Collins, Colorado, USA     |
| 15.0000 | Kekaha, Hawaii, USA             |
| 20.0000 | Fort Collins, Colorado, USA     |

**RED** indicates stations that are typically the clearest and strongest signals in the U.S.

## 9.8 Software (Free & Downloadable)

**CHIRP** (radio programming software for Windows and MAC)

<http://chirp.danplanet.com/projects/chirp/wiki/Download>

### **FLDIGI Download Page for fldigi/flarq, flamp, flmsg**

Note: This is the software that will allow you to decode digital modes such as PSK31, MT-63, Olivia, CW – Morse code, and MANY more!

[sourceforge.net/projects/fldigi/files](https://sourceforge.net/projects/fldigi/files)

### **JS8Call and Commstat**

<https://amrron.com/2023/03/26/js8call-and-commstatone-comprehensive/>

## 9.9 Additional Internet Resources

**Manually program your Baofeng Radio using the keypad  
(IMPORTANT!) Print it!**

[https://www.vhfclub.org/pdf/Baofeng\\_UV-5R\\_AD7FO\\_AE7RJ\\_KE7RAP\\_2014.pdf](https://www.vhfclub.org/pdf/Baofeng_UV-5R_AD7FO_AE7RJ_KE7RAP_2014.pdf)

### **ARRL Amateur Band Plan**

<http://www.arrl.org/graphical-frequency-allocations>

[http://www.arrl.org/files/file/Regulatory/Band%20Chart/Hambands\\_color.pdf](http://www.arrl.org/files/file/Regulatory/Band%20Chart/Hambands_color.pdf)

### **Considerate Radio Operator's Guide**

<http://www.arrl.org/files/file/conop.pdf>

### **Other Online Resources**

**Radio Reference dot com** (perfect for scanners and ham receivers alike!)

This site is an excellent source for ham repeaters, police/fire, local/state government, business, and other bands.

<http://www.radioreference.com/apps/db/>

**Locate antennas in your AO** (Cell phone, Businesses, Emergency Services, Amateur Radio, etc.)

<http://www.antennasearch.com/>

### **Shortwave Radio Listener Resources**

<https://radiofidelity.com/how-to-listen-to-shortwave-radio-using-shortwave-radios/>

<https://swling.com/blog/>

## SECTION 10 INTELLIGENCE and SECURITY



### 10.1 COMINT (Communications Intelligence)

#### Intercept Worksheet

#### Part-1 (from sparks31 28Apr2014)

1. Date:
2. Time:
3. Freq:
4. Mode:
5. PL/DPL/NAC:
6. Signal Strength:
7. Bearing:
8. Agency/dept.:
9. Local, state, federal:
10. Who initiated transmission:
11. Initiating call sign:
12. Who responded? (police, fire, EMS, etc.):
13. Responding call sign:
14. Summary of transmission:
15. Action taken:
16. Who notified:
17. Monitoring operator:

## **10.2 AmRRON COMINT Intercept/Collection Objectives**

Using Transceivers, scanners, receivers, the internet, and any other OSINT, IMINT, HUMINT resources, the AmRRON SIGINT team will collect all communications and information related to the SET, to determine:

1. What is the scenario (incident or disaster) that is developing?
2. What are the affected areas? (Size and scope)
3. Who are the communications support personnel?
4. What is their organizational structure?
5. Where are they located? How are their teams/stations configured? What is their site physical security?
6. What organizations/persons are they supporting? Locations?
7. What is the organizational structure of the entity being supported?
8. Is this a multi-agency effort?
9. Who has jurisdiction over the operations?
10. What is the role/tasking of each contributing organization?
11. Which person/group is responsible for tactical/operational decisions?
12. What means/modes of communications are they using?
13. How are they disseminating information? (Radio - voice/digital/email, phone, email, social media, courier, other)
14. How are they receiving information? (Public hot lines, citizen reports, news media)
15. What communications are they monitoring?
16. What is the intent of the jurisdictional organization?
17. What are their immediate future actions/plans?
18. Which communications did they use or mention that was not included in the pre-mission intelligence?

### 10.3 Source and Information Reliability Matrix

From Army FM2-22.3 Appendix B

Reliable and accurate information is critical for making good decisions. Unfortunately, that's often not what is passed during emergencies when emotions are running high, as are stress levels. For a multitude of reasons a person will give inaccurate and unreliable information. It's important to rate sources, whether from an individual person, or from an organization. Keep this updated and over time you will be able to learn what information is most likely to be trusted and passed on, and most important, RELIED upon. The following Source and Reliability Chart will help you in this.

#### SOURCE RELIABILITY

Reliability ratings range from "Reliable" (A) to "Unreliable" (E) as shown in the table below. In every instance the rating is based on previous reporting from that source. If there has been no previous reporting from that source. If there has been no previous reporting, the source must be rated as "F".

[NOTE: F does not mean the source cannot be trusted, but rather that there is no reporting history to make a determination one way or the other].

|          |                      |                                                                                                                            |
|----------|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Reliable             | <b>No Doubt</b> of authenticity, trustworthiness, or competency; has a history of complete reliability                     |
| <b>B</b> | Usually Reliable     | <b>Minor doubt</b> about authenticity; trustworthiness, or competency; has a history of valid information most of the time |
| <b>C</b> | Fairly Reliable      | <b>Doubt</b> of authenticity, trustworthiness, or competency                                                               |
| <b>D</b> | Not Usually Reliable | <b>Significant Doubt</b> of authenticity. Trustworthiness, or competency; but has provided valid information in the past   |
| <b>E</b> | Unreliable           | Lacking authenticity, trustworthiness, or competency; history of invalid information                                       |
| <b>F</b> | Cannot be Judged     | No Basis for evaluating the reliability of this source                                                                     |

*"History repeatedly has demonstrated that numerically inferior forces, armed with less capable technologies, can win when leaders are armed with accurate intelligence they believe they can act upon. Such intelligence can be a force multiplier."*

Gregory Elder, 'Winning with Intelligence'

*Intelligence in War: It Can Be Decisive*

## INFORMATION CONTENT

The highest degree of confidence in reported information is given to that which has been confirmed by outside sources, "1". The table below shows evaluation of information content. The degree of confidence decreases if the information is not confirmed, and/or does not seem to make sense. The lowest evaluated rating of "5" means that the information is considered to be false.

[NOTE: A rating of "6" does not necessarily mean false information, but is generally used to indicate that no determination can be made since the information is completely new.]

|          |                         |                                                                                                                                  |
|----------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | <b>Confirmed</b>        | <b>Confirmed</b> by other independent sources; <b>logical</b> in itself; <b>Consistent</b> with other information on the subject |
| <b>2</b> | <b>Probably True</b>    | <b>Not confirmed</b> ; logical in itself; <b>consistent</b> with other information on the subject                                |
| <b>3</b> | <b>Possibly True</b>    | <b>Not confirmed</b> ; reasonably logical in itself; <b>agrees with some</b> other information on the subject                    |
| <b>4</b> | <b>Doubtfully True</b>  | Not confirmed; possible but <b>not logical</b> ; <b>no other information</b> on the subject                                      |
| <b>5</b> | <b>Improbable</b>       | Not confirmed; <b>not logical</b> in itself; <b>contradicted</b> by other information on the subject                             |
| <b>6</b> | <b>Cannot be Judged</b> | <b>No Basis</b> exists for evaluating the validity of the information                                                            |

*Intelligence networks gathered military/strategic information such as Coastal Fortifications, Army deployments and their strength. The various Resistance movements in France sent regular intelligence reports to the British to be recognized. By 1944, the British headquarter was receiving thousands of telegrams and enemy plans. Many radio operators died after they were located by Germans.*

#### **10.4 PIRs (Priority Intelligence Requirements)**

**PIR Defined:** The most important thing(s) a leader/commander/command staff has determined it needs to know for making informed decisions.

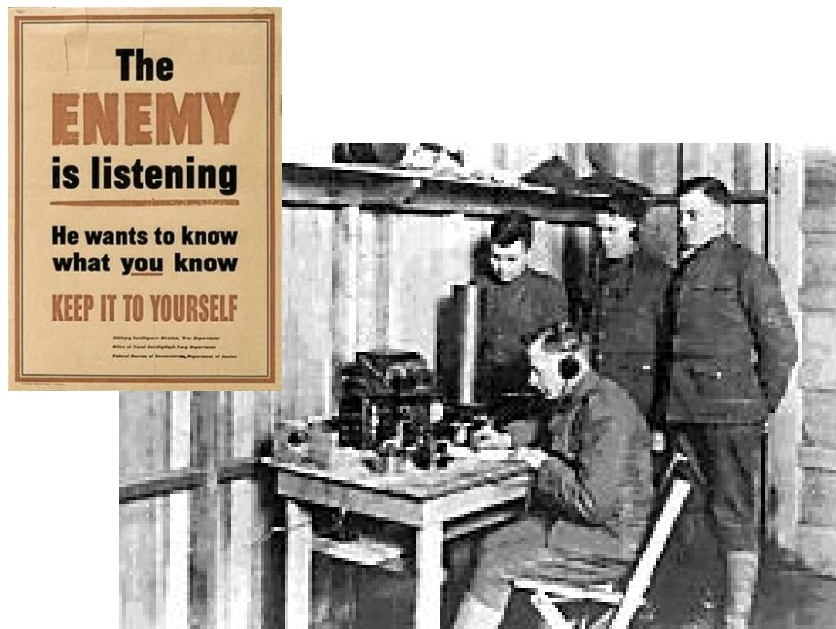
1. PIRs are determined by leadership and then issued to the information/communications network.
2. PIRs serve as a guide or directive for personnel to help determine what information needs to be reported, and which is most important.

PIRs are extremely helpful for radio operators in the field. At times during an emergency things can become chaotic and confusing. Priority Intelligence Requirements help bring attention to certain important pieces of information. Without it, key information may be overlooked or otherwise go unreported.

Leadership/commanders will need to develop courses of action related to security, logistics, command and control, and tactical or strategic responses to various threats. The information they need will be issued as Priority Intelligence Requirements.

When PIR-related traffic is being reported up the chain, it should always be treated as Priority traffic.

## SECURITY:



### 10.5 Authenticating (Friend or Foe?)

It is important to note that there is no way you can truly authenticate friend/foe using a widely-distributed, nationwide authentication method. This is designed to heavily increase the odds that you are making contact with another party who is involved in AmRRON. Authenticating someone over the radio does not mean he/she is necessarily a “good” guy. It means that he has a very high probability of being an AmRRON Operator. The AmRRON/TAPRN typically draws conservative, patriotic, preparedness-minded people to its membership, but you do not know what is truly in a man’s heart and what his intentions are, especially if you’ve never met him before.

You should always develop a separate, internal authentication protocol for your family, friends, or retreat group. This should also include a **‘Distress Word’** or other method to let others know you are in grave danger, or are under duress.

There are three layers of authentication in the AmRRON/TAPRN standardized communications plan.

1. The ‘AmRRON’ prefix
2. The ‘AmRRON X-Ray’ call sign
3. The Ten-Letter Daily Word (MASHEDROCK)



**10.5.1 The AmRRON Prefix** When you hear “AmRRON,” you’re probably talking to a patriot/prepper. That’s a good sign. But maintain vigilance. Think Security!

**10.5.2 The ‘AmRRON X-Ray’ call**

- Ham operators use the term “CQ CQ CQ” to mean “calling any station”
- For unlicensed CH3 users, use “*AmRRON X-Ray*” to call for any (no particular) station, just like licensed hams would call “CQ CQ...”
- Protocol for responding to someone calling for “AmRRON X-Ray” is to respond with your call sign (AmRRON Code Name), or the initials of your name, phonetically.

If you are trying to make contact with ANY AmRRON Operator who will respond:

Unknown party is referred to as “X-Ray”

***“AmRRON X-Ray, this is AmRRON Juliet Sierra, over.”***

If the responding party is actually an AmRRON member he/she should respond with his AmRRON call sign/code name, replacing “AmRRON X-Ray” (unknown party) with his own, actual call sign/code name.

- NEVER respond with “This is AmRRON X-Ray.”
- There are NO AmRRON call signs beginning with “X-Ray”.

**SECURITY ALERT!** If a station responds with ***“...this is AmRRON X-Ray, what’s up?”***

**This should raise a red flag!** Ask him to verify his call sign. If he responds again with ***“...this is AmRRON X-Ray”*** he is being deceptive and should be avoided.

### 10.5.3 Ten-Letter Authentication (word)

Remember: **MASHEDROCK**

| 'Ten-Letter' Word Authentication |   |   |   |   |   |   |   |   |   |
|----------------------------------|---|---|---|---|---|---|---|---|---|
| M                                | A | S | H | E | D | R | O | C | K |
| 1                                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

The authentication word is a ten-letter word, with no duplicate letters. Each letter has a corresponding number as its value. In this particular word, M=1 H=4 C=9

#### HOW TO USE IT

If the station you are in contact with is responding appropriately to your challenge, he is either an AmRRON Operator, or a really sophisticated bad guy. There are many ways this can be used to authenticate that someone has the same SOI as you (which is what this does).

1. Example: What is the sum of Alpha Hotel (2+4)? Answer: Delta
2. Expedient method example: What is the fourth letter of the [authentication] word?  
Answer: Hotel

**Develop your own authentication for your family, group, or team.**

**SECURITY ALERT!**

**NEVER say the whole ten-letter word over the air.**

### 10.5.4 PGP Authentication and Kleopatra

The most secure way to authenticate digital mode traffic over the radio is by digitally signing files. This requires having the senders' key BEFORE you need it, such as now while the grid is up.

The Elliptical Curve (ECC) key for traffic being sent by AmRRON National can be downloaded from the website, and you will find a white paper with downloadable PDF.

For training and reinforcement, all official digital mode traffic originating from AmRRON National is digitally signed using the AmRRON\_Actual pgp key, downloadable for you to import into your Kleopatra program, at:  
[https://amrron.com/wp-content/uploads/2023/02/AmRRON\\_Actual\\_ECC\\_PUBLIC.asc](https://amrron.com/wp-content/uploads/2023/02/AmRRON_Actual_ECC_PUBLIC.asc)

It is advisable to create pgp keys and exchange public keys between radio operators who frequently work with each other on the air. It may be the only way you can be absolutely certain that the traffic you received is actually from who they claim to be.

This requires FEC (Forward Error Correction) digital modes to be used, such as FLAMP, FLARQ, Vara, Ardop, Winlink, Pactor, etc.

#### WHEN TO USE:

- Regularly for training in order to maintain proficiency
- All official traffic generated from a SIGCEN, when practical and able
- Any "sensational" traffic. In emergencies, some message traffic can seem difficult to believe, or have an extreme powerful psychological effect on those receiving the traffic. Malicious actors may try to cause confusion, fear, or disorder in a civil defense situation. For example, "...these three towns are burned to the ground, no survivors..." or "...our government has announced a full surrender to the invading Maoistani government..." or an order to "...permanently cease all radio operations beginning at midnight..."
- Any time it is practical to do so. Use common sense.  
For example, it's not necessary or practical to use pgp key authentication to simply announce your station will be offline for a couple of hours while you do some antenna repairs -- routine and mundane messages.

### 10.5.5 Using Checksum Hash Authentication

While the grid is up, AmRRON National traffic (such as the AIB) is “hashed” using a checksum utility, and the SHA1 hash is posted on the sidebar of the website.

The white paper covering this, with step-by-step guide for setup is at:

<https://amrron.com/2019/03/13/white-paper-hashing-files-with-checksum-utilities-tamper-detection/>

## SECTION 11 Glossary of Terms

|             |                                                                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------|
| AIB         | AmRRON Intelligence Brief                                                                                                                |
| AM          | Amplitude Modulation                                                                                                                     |
| AmCON       | AmRRON Condition (Emergency communications readiness level)                                                                              |
| AmRRON      | American Redoubt Radio Operators Network                                                                                                 |
| ARES        | Amateur Radio Emergency Service                                                                                                          |
| ARRL        | Amateur Radio Relay League                                                                                                               |
| CB          | Citizens Band                                                                                                                            |
| CH3         | Channel 3 Project - Mutual agreement to standardize the use of channel 3 on FRS, MURS, and CB                                            |
| COMINT      | Communications Intelligence (Information gathered from monitoring any communications)                                                    |
| CW          | Continuous Wave (Morse Code is sent over radio using CW)                                                                                 |
| Digital     | A mode used for sending text messages and other data over radio waves, similar to fax machines                                           |
| DTG         | Date Time Group - Typically uses the following format:<br>YYYYMMDD-HHMMZ (Z = Zulu Time)                                                 |
| Freq.       | Abbreviated term for 'Frequency'                                                                                                         |
| Frequency   | The cycles of radio waves per second. Typically measured in millions (Mega) or thousands (kilo). Each cycle is referred to as a 'Hertz'. |
| FRS         | Family Radio Service - No license required                                                                                               |
| GMRS        | General Mobile Radio Service - License required                                                                                          |
| GMT         | Greenwich (England) Mean Time - Also referred to as 'UTC' or 'Zulu' time                                                                 |
| Hertz       | A single, complete cycle of a radio wave                                                                                                 |
| HF          | High Frequency (also referred to as 'shortwave') (3-30 MHz)                                                                              |
| IES         | Initial Event Summary                                                                                                                    |
| kHz         | kilo Hertz - radio frequency cycles measured in thousands per second                                                                     |
| LSB         | Lower Side Band - The lower portion (side) of the band                                                                                   |
| MHz         | Mega Hertz - radio frequency cycles measured in millions per second                                                                      |
| Mode        | The means of transmitting (specifically voice, digital, or CW)                                                                           |
| MURS        | Multi Use Radio Service - Uses five frequencies from the business VHF band requiring no license                                          |
| NCS         | Net Control Station - primary station responsible for facilitating a radio net                                                           |
| NOAA system | National Oceanic and Atmospheric Administration - weather and hazards alert                                                              |
| OPSEC       | Operational Security - The act of keeping your activities/information confidential and private                                           |
| OSINT       | Open Source Intelligence - News, press releases, internet, public records, etc.                                                          |
| SIGINT      | Signals Intelligence - the gathering of information related to tones, codes, direction finding, etc.                                     |
| SITREP      | Situation Report                                                                                                                         |
| SPOTREP     | Aka 'SPOT' report. A format for reporting observed enemy (or other threat) activity                                                      |
| STATREP     | Status Report - Short report of status of station or individual's location                                                               |
| SSB         | Single Side Band (when only one side of the bandwidth is used (USB or LSB)                                                               |
| TAPRN       | The American Preparedness Radio Network                                                                                                  |
| UHF         | Ultra High Frequency (300-3000 MHz)                                                                                                      |
| USB         | Upper Side Band - The upper portion (side) of the band                                                                                   |
| UTC         | Universal Time Clock - Also referred to as 'Zulu' time or 'GMT' (Time and Date in Greenwich)                                             |
| VHF         | Very High Frequency (30-300 MHz)                                                                                                         |
| Zulu        | Same as UTC or Greenwich Mean Time (GMT)                                                                                                 |

## NOTES

[illegible]

## NOTES

[illegible]

[illegible]



**AmRRON Frequency/Mode Quick Reference:**

| <b>Band</b> | <b>Frequency</b> | <b>Mode</b>                                    |
|-------------|------------------|------------------------------------------------|
| 20m         | 14.338 usb       | Voice                                          |
| 20m         | 14.110 usb       | Contestia 4/250 (check-in)<br>MFSK32 (traffic) |
| 40m         | 7.238 lsb        | Voice                                          |
| 40m         | 7.110 usb        | Contestia 4/250 (check-in)<br>MFSK32 (traffic) |
| 80m         | 3.818 lsb        | Voice                                          |
| 80m         | 3.588 usb        | Contestia 4/250 (check-in)<br>MFSK32 (traffic) |
| 2m          | 146.420 fm       | Voice (simplex)                                |
| 2m          | 144.500 fm       | MFSK32 (check-in)<br>MFSK32 (traffic)          |

**National Practice Nets:** 1<sup>st</sup> and 3<sup>rd</sup> Week of month

(Net cycle begins on the 1<sup>st</sup> Tuesday of each month)

**TUESDAY****National:**

20m 2000hrs Zulu **Voice**  
20m 2030hrs Zulu **Digital**

**Rolling Regional DIGITAL:**

80m (winter) 20:00 (8pm) Local  
40m (summer) 20:00 (8pm) Local

**THURSDAY****Rolling Regional VOICE:**

80m (winter) 20:00 (8pm) Local  
40m (summer) 20:00 (8pm) Local

Winter/Summer schedules change when DST changes

For other regional and local nets, see net schedule at  
[www.AmRRON.com](http://www.AmRRON.com)

Get the **AmRRON Team App** to receive alerts, updates, and announcements.

[www.amrron.com](http://www.amrron.com)